



Responsiveness Summary

Operable Unit 1

Lower Fox River and Green Bay Superfund Site

June 2008

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Abbreviations and acronyms used in this document

Agencies	Wisconsin Department of Natural Resources and United States Environmental Protection Agency
Amended Remedy	Remedy selected in Record of Decision Amendment, Operable Unit 1, Lower Fox River and Green Bay Superfund Site
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
Cy	cubic yards
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
OU	Operable Unit
OU 1	Little Lake Butte des Morts reach
OU 2	Appleton to Little Rapids reach
OU 3	Little Rapids to De Pere reach
OU 4	De Pere to Green Bay reach
OU 5	Green Bay
PCB	polychlorinated biphenyl
ppm	parts per million
PRPs	Potentially Responsible Parties under CERCLA
RAL	Remedial Action Level
RIFS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
Design Supplement	OU1 Design Supplement, Lower Fox River Operable Unit 1, November 2007
SWAC	Surface Weighted Average Concentration
USEPA	United States Environmental Protection Agency
WDNR	Wisconsin Department of Natural Resources
2002 ROD	Record of Decision, Operable Units 1 and 2, Lower Fox River and Green Bay Site, December 2002

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INTRODUCTION

On November 26, 2007, the United States Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) jointly released to the public the Proposed Plan for Portions of Operable Unit 1 (also known as the Little Lake Butte des Morts reach) of the Lower Fox River and Green Bay Superfund site. See USEPA Fact Sheet entitled "EPA Proposes Revisions to Cleanup Plan for Little Lake Butte des Morts." USEPA held a public meeting regarding the Proposed Plan on December 13, 2007, at Lawrence University, Youngchild Hall, Appleton, Wisconsin. This meeting was attended by approximately 60 citizens.

This Responsiveness Summary summarizes the written comments received by USEPA from the community during the public comment period and responds to those comments. This Responsiveness Summary also includes the transcript from the December 13, 2007, public hearing and responses to certain verbal comments.

In total, USEPA received 44 written comments. Comments providing specific and scientific information relevant to the remediation of the Fox River were given greater consideration than were comments expressing general opinions and concerns.

This Responsiveness Summary has three sections: Section 1 summarizes and responds to common concerns expressed by multiple commenters; Section 2 presents and responds to certain specific and more scientifically-based comments; and Section 3 sets out certain verbal comments made at the public hearing, and provides the Agencies' responses.

Acronyms and abbreviations which are used throughout the Responsiveness Summary, are shown in a Table of Abbreviations and Acronyms, on page 3. All public comments received have been compiled and are included in the Administrative Record.

Section 1. SUMMARY OF SIMILAR COMMENTS RAISED BY MEMBERS OF THE LOCAL COMMUNITY, AND AGENCIES' RESPONSES

1. Permanency of Capping as a Remedy

Comment: Commenters expressed the following concerns:

- natural forces (flooding, ice effects, biological action, etc.) could damage the caps and cause a release of PCB contamination from capped sediments.
- capping is not a technology that has been proven to be effective in containing contaminants in a river system, and is too experimental.
- capping might not permanently contain PCB contaminated sediments, and
- a preference for removal of contaminants by dredging.

Agencies Responses

At the Fox River Site, leading experts in the fields of sediment transport, ice flow, bioturbation effects, and propeller wash were consulted. These experts comprehensively evaluated these issues and, based on these analyses, a cap has been designed to remain stable over the long term, and effectively contain PCB contamination in OU1. This design also incorporates an additional margin of safety to support long-term stability and effectiveness.

To verify that the cap will be constructed to design specifications necessary for stability and effectiveness, upon completion of cap construction, evaluations will be performed to confirm that the cap was properly installed consistent with requirements in the Amended Remedy and the final design. At a minimum, these evaluations will include bathymetry surveys, coring, and if appropriate, sediment traps. Cores samples will determine whether the necessary thickness of "clean" sand and armor stone have been placed over target areas. The core samples will also be used to measure the PCB concentrations in the caps.

While the design specifications provide the necessary construction standards for long-term stability and effectiveness of caps, an additional measure of protectiveness will be provided by a long-term monitoring program. This will consist of surveys similar to post-construction monitoring described above to evaluate possible contaminant migration through the cap. For long-term monitoring, the integrity and containment effectiveness of the cap will be evaluated at a minimum, 2 years and 4 years after construction, and every 5 years thereafter. Monitoring of the cap will continue as long as contamination remains that could pose a threat to human health and the environment (effectively in perpetuity). Additionally, if a large storm event occurs (a 50 year storm or greater) or other events that might impact a cap's integrity occur, additional cap monitoring will be conducted, if required by the Agencies. If monitoring shows that caps are not effective in containing PCBs, cap enhancement, cap repair, or cap removal along with the removal of underlying contaminated sediments, would be performed as needed.

Regarding the “unproven” nature of capping technology, Attachment 1 provides a summary of experience for thirty-four (34) contaminated sediment capping projects in the United States and throughout the world. This includes at least six river capping projects, as listed in Attachment 1, page 68, as follows:

1. Sheboygan River/Harbor, Wisconsin;
2. Wausau River Site, Wisconsin;
3. Manistique Capping Project, Michigan;
4. McCormick and Baxter, Portland, Oregon;
5. Duwamish Waterway, Seattle, Washington; and
6. Mill-Quinnipiac River, Connecticut.

Experience on these projects has demonstrated the viability and effectiveness of capping in rivers and similar environments as a method to contain contamination, and to reduce risks to human health and the environment.

In addition to monitoring the physical integrity of the cap, environmental monitoring of surface water and fish will be conducted, as described in the Long-Term Monitoring Plan for the Fox River (discussed in greater detail in the Amended Remedy in Section XI.D).

Finally, certain “institutional controls” will be established to reduce the possibility of damage to the cap. These “institutional controls” may include, among other things, restrictions on anchoring, construction activities in the river, and dredging and maintenance and monitoring of dams. The institutional controls are discussed in greater detail in Section XI.D of the Amended Remedy.

Regarding a preference for dredging as expressed by some commenters, Agencies experience at OU1 shows that while dredging has successfully removed a significant mass of PCBs from the Fox River, dredging alone would not likely achieve the cleanup standards required in the 2002 ROD. Based on results from dredging 335,000 cubic yards of sediments at OU1, it is projected that dredging alone (without including sand cover for some areas) would result in a PCB surface weighted average concentration (SWAC) of 0.48 ppm from the current PCB SWAC concentrations of 1.9 ppm. The 0.48 ppm PCBs achieved by dredging is higher than the 0.25 ppm PCB SWAC goal contained in the ROD. Thus, the Agencies other steps may need to be taken to achieve the 0.25 ppm goal, such as using a combination of dredging, capping and sand covers to more quickly and consistent attain the 0.25 ppm goal.

Post-construction PCB sampling results from other capping projects are similar to the results obtained from the Fox River OU1 dredging project, with generated residuals having between 2 to 9 percent of the mass of contaminated sediments in the last dredging “cut.” The impact of PCB residuals on the ability to achieve PCB reduction goals is described in greater detail in, “The Four Rs of Environmental

Dredging: Resuspension, Release, Residual, and Risk,” U.S. Army Corps of Engineers, January 2008.

2. The lower costs of capping compared to the higher costs of dredging are allegedly driving the ROD Amendment

Comment: Commenters felt that USEPA and WDNR are allowing cost to be the primary consideration in amending the ROD to include more capping, and less dredging.

Agencies Response

Under the National Contingency Plan, 40 C.F.R. Part 300 promulgated under CERCLA, cost is one of nine criteria that USEPA considers in making remedy decisions. The first two “threshold criteria” under the NCP are ability to protect human health and the environment, and ability to comply with Applicable or Relevant and Appropriate Requirements (ARARs). Both the Amended Remedy and the 2002 ROD remedy meet the two threshold criteria equally well. The alternatives were then evaluated against the balancing criteria (of which cost criteria is just one) and the modifying criteria, to decide whether to modify the remedy. The “balancing criteria” of short-term effectiveness, implementability and cost did play important roles in the decision to modify the remedy. For these and other balancing criteria, the evaluation showed that the Proposed Plan (as reflected in this Amended Remedy) is equally or more advantageous than the 2002 Remedy. The relative advantages of the 2002 ROD remedy and the Amended Remedy is discussed in greater detail in Section X.B of the Amended Remedy.

3. Concern that capping might limit restoration of the shipping channel in OU1

Comment: One commenter was concerned that capping might interfere with use of the historical shipping channel in OU1.

Agencies Response

The historical shipping channel will be dredged and will not be capped. Therefore, the Amended Remedy should not impair navigability. A significant portion of the channel has already been dredged.

4. Treatment by destroying PCBs is the preferred approach

Comment: Some commenters believe that treatment of sediment by vitrification (or “burning”) would be a better approach because it would permanently destroy PCBs, and would be more cost-effective.

Agencies Response

Vitrification is a process whereby PCB sediments (or other pollutants) are heated to high temperatures which destroys the PCB molecule. The Agencies have previously evaluated vitrification technology for potential use at the Fox River Site in response to comments of citizens who believed this treatment method might be preferable to dredging and disposal. However, the Agencies have determined that vitrification would result in the release of chlorine gas which would require capture and treatment as part of an air pollution control permit limitation. The sediment is transformed into a glass-like material, with any remaining contaminants (e.g., metals) tightly bound in the glass matrix in an inert and non-hazardous form. Although vitrification appeared promising initially, the Agencies concluded that it would not be cost-effective or implementable on a large- scale basis. The capital costs involved in constructing a treatment plant capable of handling the volume of sediment from the Fox River would be high, as would the cost of fuel needed to remove water from the sediments. Obtaining all environmental permits (including but not limited to air permits) necessary to operate such a facility would be a daunting task, particularly given that such a facility would likely be opposed by people who reside or work in the vicinity of any proposed site.

In summary, vitrification is an innovative, but as yet not a sufficiently proven technology. Given the magnitude of the Fox River/Green Bay Site, the Agencies believe that proven and demonstrated technologies should be used in a remedial action that addresses contamination at a Superfund site of this size.

5. Complaints about the public meeting

Comment: Some commenters felt that the public meeting was poorly timed relative to the holidays. Some commenters also argued that priority should have been given to the verbal comments of community members, rather than allowing the verbal comments of remedial action contractors to have equal time and weight with community commenters.

Agencies Response

USEPA balanced the timing of the public meeting to allow attendees adequate time following the meeting's November 27, 2007 announcement to review the Proposed Plan, but not to make the meeting so late in December that it would interfere with the holiday season. Hence a meeting date of December 13, 2007 was selected. USEPA also provided a 66-day public comment period for submittal of written comments, exceeding the minimum 30-day comment period, to give the public extra time to submit comments.

Regarding giving contractors' comments equal consideration at the public meeting, the Agencies often do not know commenters' affiliation, nor do they restrict access to the community involvement process based on affiliation. The Agencies give all commenters equal consideration.

Section 2. COMMENTS REPRODUCED VERBATIM AND THE AGENCIES' RESPONSES

In this Section the Agencies shall reproduce verbatim significant comments that they received from the public concerning the Proposed Remedy, and will respond to those comments. Agencies responses to these comments are included in **bold** within the body of the comment under "Agencies' Response."

Comments by Ken Stromberg

These comments on the proposed (November, 2007) revisions to the cleanup plan for Little Lake Butte des Morts (LLBDM) are not detailed technical comments, instead, they address the overall strategy behind this proposal and the overwhelming failures of that strategy in enhancing remediation of this site. This proposal represents a repudiation of long-standing accepted principles underlying this site for the past 20 years. As far back as the late 1980s, when the Green Bay Remedial Action Plan was being developed with major citizen involvement, technical opinion and citizen acceptance revolved around one underlying fact, namely, that remediation required removing toxic materials from the lotic environment insofar as possible. Covering up sediment deposits was always regarded as an unacceptable alternative unless there was no other course of action available because of unusual characteristics of minor localized deposits. The logic was elegantly simple then and it remains so today. Erosive forces downcut river beds and move material. Failure to accept this fact reveals a denial by advocates of capping as a first choice that the laws of physics somehow do not apply to contaminated sediments in the Fox River system. No matter how large the armies of consultants employed by the Responsible Parties, physical laws still apply and their arguments to the contrary should be rejected as the obfuscations that they are. The Action Agencies should not lose sight of these realities and push remediation, or the results of failure to remediate, off onto future generations. Recent suggestions that permanent is a relative condition defy logic. Permanent as defined in Webster's Ninth is, "continuing or enduring without fundamental or marked change." There is no indication in this standard definition that permanent has a time limit.

Agencies' Response

As discussed in the Amended Remedy, Section X.B.3, and in the Agencies' response in Comment 1, Section 1 above, the long-term effectiveness of capping has been rigorously and comprehensively evaluated, including consideration of the following:

- 1) scour from water flow (i.e., floods and storms),
- 2) bioturbation,
- 3) ice scour,
- 4) propeller wash scour, and
- 5) other technical considerations (cap stability, etc).

These evaluations demonstrate that an engineered cap will be effective in the long-term in containing contaminants in the Fox River. The engineered cap design includes a robust armored layer, to resist erosive forces, and to help secure long-term stability.

It is shocking to discover that a cover up of the hazardous materials in the river is now regarded as solving any long-term environmental problem. The real rationale for this proposed action can only be based on reduced cost for the polluters. This should have little or no bearing on choosing alternative cleanup strategies when compared to actual performance in removing hazardous materials from the river bed. These costs rightly should be borne by the irresponsible corporations that created the problem in the first place and have now resisted taking effective remedial actions for more than 30 years. The Action Agencies should remind themselves that their responsibility is to the citizens of this area, not to corporate balance sheets.

Agencies' Response

The Agencies overriding concern is that the Amended Remedy be protective of human health and the environment, consistent with requirements set forth in CERCLA and the National Contingency Plan (NCP). USEPA has carefully followed the procedures set forth in CERCLA and the NCP for amending a remedy at a Superfund site, and has found that this Amended Remedy meets the standards for such amendments. Cost is only one of nine criteria that the NCP requires USEPA to consider in selecting or modifying a remedy for Superfund Sites. At this site, USEPA compared the Amended Remedy against the 2002 ROD Remedy under each of the nine NCP criteria. The first two threshold criteria are: 1) that the proposed remedy is protective of human health and the environment, and 2) that all Applicable or Relevant and Appropriate Requirements (ARARs) can be met by the Amended Remedy. In USEPA's judgment, both the 2002 ROD Remedy and the Amended Remedy meet the first two threshold criteria equally well. Given that, USEPA next considered the "balancing criteria" under the NCP. The Amended Remedy and the 2002 ROD Remedy were considered both to be implementable and to provide long-term and short-term effectiveness. The Amended Remedy was found to be more cost effective (i.e., \$102 million versus \$144 million). Both remedies are acceptable to the State Agencies (i.e., WDNR), as witnessed by WDNR's cosigning this Amended Remedy. Regarding community acceptance, while some commenters opposed the Proposed Plan and Amended Remedy, others supported it. Overall, the comments did not cause the Agencies to change their view that amending the ROD is appropriate.

The argument that cleanup targets will be reached one or three years quicker is fatuous at best. Actions to clean up the PCB mess at this site have been in the talking stage for more than 30 years already. A delay of even a few years is insignificant if the result is actual remediation and PCBs are permanently removed from the River. Similarly, arguments about additional disposal volumes are disingenuous. If the volume of material to be landfilled was a real concern, as it should have been, the thermal

destruction option would not have been abandoned in the early stages of planning. Making this argument now to support leaving PCBs in the River merely reinforces the fact that extremely poor judgements were made when thermal destruction was rejected.

Agencies Response

While it is arguable that recovery of the Fox River 5 years sooner is not a large improvement to the recovery time, it is nevertheless worthy of consideration. Besides achieving a protective result sooner, this would reduce the short-term environmental effects from construction related activities as compared to the 2002 ROD remedy.

Regarding vitrification, (discussed in the Agencies Response in Section 1, Comment 4, page 8, above), as previously stated, the Agencies previously evaluated that treatment technology vitrification and concluded that it posed air pollution concerns, would be difficult to implement- due to the number of environmental permits that would be required and the community resistance that would result from any attempt to site the facility.

In short, the Agencies did not believe that vitrification is not a sufficiently proven technology to be used on a wide-scale basis for a large Superfund site such as the Fox River/Green Bay site.

Aside from these operational considerations, the most serious flaw in this proposed plan is reliance on a nonexistent monitoring plan to detect cap failures and spur repair of them. It is absurd to think that any further actions will be taken once the equipment is demobilized and enforcement attention is focused elsewhere. The Responsible Parties, even if the Agencies could find a way to force them to the table, would make the argument that whatever failure exists is just a minor problem of far too little significance to justify additional actions. Given the publicly available evidence, there is no substantive monitoring plan yet, and despite a long history of promises, the Agencies have no public credibility that there is any substantial effort being expended on actually developing such a plan. Monitored Natural Recovery has been selected as an option for the most important parts of this overall project and there is no visible progress on developing even this most visible monitoring program. The public should not be expected to believe any claims by Agencies or Responsible Parties that they are actually addressing these most important actions. Endless meetings of Agency technical staff and Responsible Party consultants do not indicate progress on developing monitoring plans, instead they illustrate the failure of the Agencies to compel the Responsible Parties to meet their legal responsibilities. Vital opportunities to obtain baseline information have been washed down the River into Green Bay and Lake Michigan, evaporated into the atmosphere, and absorbed into biota while these two groups negotiate at cross purposes.

In summary, the proposed changes to the LLBDM cleanup plan are unacceptable because they do not contribute to permanent remediation of the River, they primarily constitute a cover up solution which will eventually result in

the release of the PCBs buried. The arguments advanced to support the capping alternative do not stand up to the only real tests, effectiveness and permanence. Finally, the lack of information on long term monitoring reinforces the failure of this proposal to address the real issue here, permanently reducing the exposure of environmental receptors to PCBs originating from contaminated Fox River sediments.

/s/

Kenneth L. Stromborg, Ph.D., CWB

Agencies Response (to the last two paragraphs above)

In addition to conservative engineering of the cap design, concerns regarding the remedy's protectiveness and effectiveness are also addressed by stringent requirements for long-term monitoring and maintenance. Monitoring in this ROD Amendment includes both cap integrity and performance evaluations, as well as "environmental" monitoring (i.e., of surface water and fish). If monitoring indicates that the remedy is not achieving the Remedial Action Goals, then USEPA will, if necessary, require additional measures. The details of this monitoring will be developed further in the design prior to remedy implementation.

Finally, the evaluations and performance of other capping projects demonstrate the effectiveness of capping. Monitoring for capping projects for several decades are summarized in Attachment 1, page 68.

Comment by Dr. Peter De Fur, Environmental Stewardship Concepts on behalf of the Clean Water Action Council

Comments on OU1 Design Supplement Lower Fox River Operable Unit 1

Prepared by Dr. Peter de Fur, Environmental Stewardship Concepts, on Behalf of the Clean Water Action Council --- December 12, 2007

Summary of Issues and Recommendations

- The Optimized Remedy presented in this Design Supplement represents a significant step backward from the original goals of the cleanup
- We maintain our strong opposition to capping and natural recovery in the Fox River
- The only proven remedy to contaminated sediments in rivers like the Fox is removal
- "Natural recovery" is completely unproven and undocumented as a remedy
- The placement of caps within the Fox River violates NRC guidance on capping
- Capping should be restricted only to locations where sediment removal presents a threat to the structural integrity of cultural features
- Dredging of contaminated sediments should be performed using an environmental bucket dredge rather than cutterhead hydraulic dredge whenever possible
- Strict institutional controls should be implemented during dredging such as limiting dredging activity to certain times and conditions to limit the resuspension of contaminated sediments
- If sand covers are used at all, they should be at least 6 inches thick to compensate for the effects of inevitable erosional forces that will act on the river bottom
- The schedule for monitoring efforts must be presented definitively and cannot be considered reliable in its current form

- **Post-capping sampling and surveys must specifically require annual inspections in the spring to ensure the continuing effectiveness of the remedy**
- **The Design Supplement must include a contingency plan outlining the steps to be taken if caps prove to be ineffective or are damaged**

Document Summary

This document incorporates the changes proposed in the recent Optimized Remedy regarding PCB contamination in the Fox River for OU 1, the area of the Fox River directly adjacent to Lake Winnebago running through Appleton. By relying on capping, loose sand covers, and monitored natural recovery, the Optimized Remedy represents a significant step backward in efforts to reduce risks to public health and the environment from PCBs within the river. The Design Supplement is intended to provide specifics regarding cap construction, dredging methods and other activities involved in the cleanup of OU1.

General Comments

The Design Supplement for OU 1 suffers from most of the same flaws as presented previously for OU2-5. The reliance on capping and sand covers is misplaced and has a high probability of failure particularly in some locations. Our position on natural recovery, sand covers, caps, and dredging remains unchanged: "natural recovery" is completely unproven and undocumented while caps and covers have no demonstrated successes in rivers like the Fox. Removal is the only proven approach to dealing with contaminated sediments in freshwater systems like the Fox River. The following comments and recommendations are intended to mitigate some of the risks we have previously identified and improve the overall cleanup.

Agencies Response

The Agencies do not agree that there is "a high probability of failure" for engineered caps. To the contrary, Attachment 1, page 68, summarizes the design, operation and monitoring results for 32 capping projects that were constructed between 1978 and 2001, and demonstrates that these caps have been effective. Attachment 1 includes a summary of the following information for these projects: Chemicals of Concern, Site Conditions, Design Thickness, Cap Material, Year Constructed (1978 to 2001), Performance Results, and other pertinent information. A similar table was also included in the Responsiveness Summary to the 2002 ROD (Responsiveness Summary, White Paper 6B, Attachment 1). Information on these projects indicates that to-date, these caps have been effective in providing contaminant containment for a considerable range of physical conditions. The cap design for OU1 has been designed with a robust armor layer to resist erosive forces and help secure long term stability of the caps.

It is not necessary that sand covers stay in-place over the long-term, but instead mixing with the underlying sediment using the "worst case" scenario will ensure that no sediments above the PCB Remedial Action Limit (RAL) will remain. Thus their use is restricted to certain conditions. Sand covers will only be employed as the primary remedy if PCB concentrations are 2 ppm or less, and only in areas where

the contaminant zone is 8-inches or less. Sand covers also will be employed to manage dredge residuals when the surficial samples are 1 to 5 ppm total PCBs. Thus, if the underlying sediments were mixed with the cover materials, the resulting concentrations will be less than the 1 ppm PCB Action Level.

The Agencies agree there are no sites where monitored natural recovery alone has resulted in contaminants reaching protective levels. However, natural recovery is not relied upon as a "stand-alone" for this remedy. Rather, it is only considered for dredge areas where sediments will be removed as much as is feasible, with additional recovery of the system through natural processes, further reducing contaminant concentrations in surficial sediments. Based on historical data and trends (documented in Appendix B or the Remedial Investigation for the Lower Fox River and Green Bay, Wisconsin, dated December 2002), natural recovery trends for the Fox River would achieve some recovery, but would not achieve a protective result in a reasonable amount of time. However, computer modeling predicts dredging, capping and sand covering actions in combination with natural recovery, would result in recovery to protective levels in fish and other biota in OU1 in a reasonable amount of time.

The reliance on capping and monitored natural attenuation to contain PCBs is based on weak assumptions and no documentation. The basis of the rationale for their use is frequently contradicted by the data. While capping may provide adequate protection at some sites, it is far less suited for others. The key factor in a cap's ability to adequately isolate contamination is the long term stability of the cap. Unfortunately, little to no long term monitoring of caps has been reported in peer reviewed literature, especially in areas that are hydrogeographically similar to the Fox River.

For this reason, the combination of dredging and capping in certain areas of the Fox River is ill advised. The Optimized Remedy would leave the most contaminated sediments in place, increasing risks to human health and wildlife in the event of a cap failure. A cap cannot be guaranteed to be 100% effective over the long term (100+ years), making the safest solution the dredging of all contaminated sediments.

Agencies Response

Responses to these comments are addressed in Section 1, Agencies Response to Comment 1, page 7, above. In addition, the most contaminated sediments in OU1 have already been or will be dredged. Capping will occur after dredging in OU1.

There are a number of factors that contribute to the likelihood that a cap in the Fox River would be compromised. Chief among these is ice, either as frazil ice or ice jams. Frazil ice is ice that forms within the water column, and occurs most often in turbulent, shallow waters at extreme temperatures (below 0° F) (Daly, 1994). The greatest threat from frazil ice occurs when the ice attaches itself to bottom sediments, after which it is classified as "anchor ice." The formation of anchor ice not only facilitates increased scouring, but also encourages ice jams that have an even greater impact on the riverbed. These ice formations have the potential to occur within the Fox River over one third of the year. The placement of caps within the Fox River runs against National Research

Council (NRC) and EPA guidance regarding the placement of caps for this and other reasons (NRC 1997, Palermo et al 1998).

Agencies Response

An expert in the field of ice scour determined that the potential for ice scour in OU1 is negligible particularly given where the proposed capped areas are located (miles downstream from turbulent flow areas and where post-capping water depths will be 6-feet or more). See Appendix E of the Design Supplement for more details.

A critical component to successful capping is source control. If contaminated sediments continue to be deposited on top of a cap once it is in place, the cap is of limited effectiveness. The placement of a cap in such situations also makes future remedial actions more complicated and difficult. Cap armoring effectively prevents many types of dredging and would have to be removed prior to any remedy. Currently, there is no documented comprehensive plan to limit continued PCB loading into the Fox River. Without such a plan, placement of a cap in the Fox River violates NRC and EPA guidance (NRC 2001, Palermo et al 1998).

Agencies Response

There are no known new point sources of PCBs to the Fox River discharges. Regarding contaminant non-point sources of PCBs into the Fox River, these sources are presently being addressed by WDNR's permitting and water quality division in various ways, including but not limited to Chapter NR216 of the Wisconsin Administrative Code, which requires industrial sources of storm water runoff to develop "stormwater pollution prevention plans."

Previous work documented in the Feasibility Study issued December 2002 provides the basis for the remedial action based on the nine criteria in CERCLA guidance for selection of the remedy. That work considered the relative contributions of various PCBs sources into the system, and determined that the sediment of the river was by far the largest source of PCBs presenting an unacceptable level of risk to human health and the environment. While other PCB sources were acknowledged to exist, these other sources are much smaller, and not environmentally significant.

Thus, current PCB sources to the Fox River (both point sources and non-point sources) are not significant, although they merit ongoing monitoring to assure that no new sources of PCBs are introduced into the Fox River. Non-point sources are being addressed as part of the storm water management program, and other State programs. Finally, atmospheric sources are very small due to the small surface area of the Fox River.

The equipment proposed to dredge contaminated sediments needs to be optimized to reduce resuspended sediment, spillage, and sediment left in place, collectively referred to as residuals. Section 4.2.2 proposes that 2008 dredging will be conducted using swinging ladder cutterhead dredges. Environmental bucket dredges would be much more effective and efficient. Resuspension rates from environmental bucket dredges typically run at one percent of the dredged volume or less when properly operated (NYNJ Harbor Partnership 2003). Not only would the use of environmental bucket dredges

reduce the amount of PCBs that are widely distributed through the Fox River but would also reduce the number of instances that locations will have to be re-dredged.

Agencies Response

The dredge that has been used for OU1 has been very effective in minimizing resuspension and release of contaminated sediments. In fact, a silt curtain has not been necessary as there have been essentially no turbidity measurements above background. Turbidity is monitored during all dredging and capping actions and results for OU1 show that neither action has significantly exceeded the trigger concentrations that would require shutting down operations.

Regardless of the type of environmental dredge, the dredging portion of the remedy is unchanged for the Amended Remedy compared to the 2002 ROD remedy. Section 4.2.2 of the Design Supplement is a more detailed consideration of how the dredging would be done to meet the ROD's performance standards and has no bearing on the Amended Remedy. The Amended Remedy does not specify dredge type.

The implementation of institutional controls during dredging would have a similar effect. Actions such as erecting silt curtains and only dredging under specific conditions such as low wind and flow rates would also reduce the amount of residual contaminated sediment that is released (Francingues and Palermo 2005). Dredge operators should also have documented experience working at contaminated sites and this documentation should be accessible to the public. The above are all logical steps that will greatly reduce dredging residuals as well as costs by reducing the chances that some areas will need to be re-dredged.

The criteria for the selection of which areas will be redredged are unacceptable, as are the proposed solutions to residuals. The Design Supplement states that only areas with residual PCB concentrations over 5.0 ppm will be dredged. Residuals under this value will be covered by a layer of sand. Presumably dredging is occurring in areas where capping would not be acceptable, either because of the sheer stress from natural flow patterns or other reasons. Sand covers will not persist in such areas. Much of the dredging will occur in locations where recreational boat traffic is common. Prop wash, keels, and anchors from these vessels would easily disturb a loose sand cover. This situation could easily result in the average concentration of PCBs in some areas actually increasing after dredging. The dredge management plan needs to be revised to minimize both the resuspension and spread of contaminated sediments. If residuals with PCB concentrations over 1 ppm remain after dredging, the area must be redredged.

The data in Table 2-5 are confusing because it appears to assume that in one Sub-Area (POG2) PCB concentrations will still increase from 2.1 to 3.7 ppbn after dredging even if all precautions are successful. Remedial actions that increase risks over the original concentrations are completely unacceptable. It is unclear how the removal of contaminated sediments could actually increase the average concentration of sediments in POG2, or if this increase is expected as a result of dredging residuals, a miscalculation, or some other factor. If this is not a calculation error, then it demonstrates a significant flaw in the cleanup design for this area, and the design flaw needs to be immediately addressed.

Agencies Response

Experience on OU1 has shown that the best way to minimize residuals is to employ different types of dredges for different conditions. A new dredge called the “Vic Vac” has proven effective in minimizing residual sediments with PCB contamination, particularly for conditions at OU1 (thin contaminated deposits over a hard surface). Silt curtains have been shown to have limited effectiveness in containing resuspension. The action of deploying and retrieving the curtains often causes similar releases to the dredging activities.

The increase in concentrations discussed in the Design Supplement relates to contaminant concentrations in the sediment surface layer (dredged residuals). Any increase in this surface layer is a result of deeper sediments having higher PCB concentrations that may be re-exposed.

Regardless of these considerations, the suggested actions relative to residuals have no bearing on selection of the remedy, but are instead more detailed design considerations.

The placement of sand covers over sediments with low concentrations of PCBs is not advisable, since these covers can be quickly eroded. However, we acknowledge that this remedy has been agreed upon by the regulatory agencies and that it will eventually be implemented. To account for the inherent risks from erosion to these sand covers, all sand covers should be at least six inches in depth instead of placing three inch layers in areas with lower contamination. Three inch layers of sand could erode after even one high flow event, and scoured even more easily. Such thin sand layers though less costly in the short term would inevitably lose their effectiveness over time, particularly in locations with low deposition rates. Data within the supplemental design report support this possibility. For example, in Sub-Area F of OU1 a three inch sand cover is proposed but according to Appendix D the areas where the cover will be placed will be subject to the highest sheer stress from the combination of wind and waves. A three inch cover in this area will not persist for very long. If the sand cover is to be implemented, it should at least be thick enough to have a chance to make difference in overall PCB concentrations in the Fox River rather than being eroded away completely after one significant event.

Agencies Response

Both 3-inch and 6-inch sand covers are primarily a method to accelerate natural recovery and are not intended to be permanent features. Sand covers are an effective method for designated areas because the concentrations are only slightly above the 1.0 PCB RAL. The sand covers will be 3-inches thick for an 8-inch or thinner zone with PCB concentrations between 1.0 ppm and 1.4 ppm, and 6-inches thick for an 8-inch or thinner zone with PCB concentrations between 1.4 ppm and 2.0 ppm. A “worst case” scenario of complete mixing of the sand cover would still result in meeting the 1.0 ppm PCB RAL for cover areas.

Long term considerations also dictate that an in-depth monitoring program be in place to regularly assess all remedies. We are pleased that there is a mandate for such a program within the design supplement, but disappointed

that the design supplement provides few specifics. The lack of specifics in the Design Supplement is disconcerting, particularly given the backward step that the Optimized Remedy represents in terms of the effectiveness of the cleanup. Nothing has changed to reduce the concerns that severe weather events could compromise either the caps or the sand covers. There is ample evidence that scouring from ice or severe weather is likely, and therefore WDNR needs to monitor both the integrity of the caps as well as sediment, water column, and fish tissue concentrations of PCBs annually at minimum. The selection of the Optimized Remedy has damaged the public's faith in WDNR's efforts to protect public health and the environment in and around the Fox River, and the lack of specifics in the monitoring plan only reinforces this notion.

Agencies Response

Severe weather events have been factored into the cap design. If "trigger events" are deemed to occur, there would be additional monitoring. Cores would be evaluated to ensure cap integrity and chemical analysis to confirm containment of PCBs. Section XI.D of the Amended Remedy gives an outline for cap monitoring, including hydrographic surveys and core sampling for caps, as well as the monitoring schedule. Further details of the monitoring program will be developed in design with final approval by the Agencies.

Inspections of caps should occur in the spring to evaluate if caps were impacted by ice. Severe scouring from ice that occurs in the winter months often cannot be detected until the spring (EPA 2005). Inspections can be carried out either visually with diving equipment or other means like bathymetric sonar surveys. We are aware of the conclusions in the ROD as well as in Appendix A of this design supplement that ice scour will not be an issue, but we do not share the same confidence in this opinion as the WDNR. There are simply not enough data to rule out this possibility and what data do exist imply that scouring has a high likelihood of occurring. For more information regarding these risks please review our previous comments on the ROD for OU2-5.

Agencies Response

An expert in the field of ice scour has determined that the potential for ice scour is negligible (Appendix E of the Design Supplement), especially in the areas to be capped (with post-capping water depths of 6-feet or more). Further, capping will not be performed in shallow areas and ice damming has not been observed in OU1.

Annual monitoring is critical to measuring progress, understanding needed changes, and establishing confidence in WDNR's efforts to protect the public given the very real risks involved. Even isolated instances of damage to caps or sand covers could-quickly expand and compromise cleanup goals.

Agencies Response

Semi-annual monitoring will be done for the few years after cap installation and every 5 years thereafter. Results for other capping projects (see Attachment 1, page 68) demonstrate the adequacy of this monitoring schedule.

The Design Supplement should also include a contingency plan detailing what steps WDNR will take if a cap is compromised or fish tissue concentrations fail to drop as expected. If there is a failure in a cap there will not be months for WDNR to make a decision on how to act. Damage to the caps could quickly expand, and particularly in areas where high concentrations of PCBs will remain directly under the capping damage could result in significant releases of contaminants in a short period of time. WDNR has been made well aware of the risks associated with capping these areas and should be prepared to address them.

Agencies Response

It is highly unlikely that the cap would be completely removed as a result of erosive forces. It is more likely that impacts to the cap, if they occurred, would be localized. If impacts occur, an analysis of the injury to the cap will be conducted. Results will determine whether the cap will be repaired with similar materials, repaired with more robust materials, or removed along with the underlying contaminated sediments. Furthermore, residual risk for capping areas is limited, as dredging will have removed 72 % of the PCBs above the 1 ppm PCB RAL prior to capping activities.

We remain unconvinced that the Optimized Remedy represents an effective solution to PCB contamination in the Fox River. Capping represents only a temporary solution and without a source control plan the placement of caps will only complicate inevitable future remedial actions. If the Optimized Remedy is to be implemented, simple protective steps must be implemented to make it as effective as it can possibly be. These steps include making sand covers deep enough to at least be temporarily effective, dredging in ways that minimize resuspension and residuals, and developing specific monitoring and contingency plans. Any final document that does not include these basic steps represents a failure to protect both human health and the environment from PCB contamination in the Fox River.

Agencies Response

PCB sources on OU1 have been controlled and, as discussed above, caps installed on other projects have proven to be effective for containing contaminants over the long-term (Attachment 1). The cap and sand cover designs have considered the site specific conditions with a robust design to provide long-term effectiveness and protectiveness. This will satisfy the requirement that the Amended Remedy is protective of human health and the environment.

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Section 3. PUBLIC MEETING TRANSCRIPT AND AGENCIES RESPONSES

A public meeting was held December 13, 2007. Approximately 60 people attended this meeting. The transcript of the comment portion of this meeting and written Agencies responses by the Agencies are below. Page numbers and page headers (i.e., "Transcript of Little Lake Butte des Morts Proposed Plan Meeting 12/13/2007") from the original hardcopy report were deleted, but there are no substantive alterations. The complete meeting transcript, including a presentation by the Agencies and questions and answers can be found in the Administrative Record.

Transcript of Little Lake Butte des Morts Proposed Plan Meeting 12/13/2007
1 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
PUBLIC MEETING
Lower Fox River/Green Bay Site
6 Little Lake Butte des Morts Proposed Plan Meeting
Lawrence University
9 Youngchild Hall, Room 121
10 Appleton, WI
11
12 Thursday, December 13, 2007
13 6:30 p.m.

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25
1 SUSAN PASTOR: Hi, everyone. I'm Sue
2 Pastor. I'm with the U.S. Environmental Protection
3 Agency. I'm the Community Involvement Coordinator.
4 I work on the Lower Fox River Project. I have been
5 working on this project a long time, I think since
6 about 1998, 1999. Next to me is Jim Hahnenberg. He

7 also has been working on this even longer. He's
8 the Remedial Project Manager. He is my co-worker
9 and he's the technical person who works on this. He
10 also works closely with the DNR and Department of
11 Health and various other parties. They are all in
12 the audience tonight, so if we need help answering
13 questions, we have representatives from the
14 Department of Natural Resources, Wisconsin
15 Department of Health and Family Services. The
16 companies are represented. So if there is a
17 question that we need some help with, we have a
18 person who might be able to help us out in that
19 area, too.

20 I hope you picked up an agenda tonight,
21 because we want to stick to it and try to move it
22 along. We have this room, well, we will have it
23 until ten o'clock. Hopefully we won't be here that
24 long, but we can if we need to be, which means by
25 nine-thirty we will probably have to wrap up so we
1 can honor the University's wishes and be out by ten.
2 I also want to call your attention to our
3 court reporter sitting over there. She is taking
4 down the minutes of the meeting, and the transcript
5 will be available in the libraries in the area here,
6 as well as on our website. Our information
7 repositories, which is another way of saying
8 libraries, are in Green Bay, right here in Appleton,
9 Sturgeon Bay, Oneida, and Oshkosh. So all of our
10 technical documents related to this project are
11 there, and most of them are on either our website or
12 the DNR's website or both, or they're linked to each
13 other. You can find what you need.

14 The public comment period I want to remind
15 you goes till January 31. So the court reporter is
16 here to take your comments for the record tonight if
17 you want to do that verbally. You probably took a
18 number, and we will call you in order of those
19 numbers later on. According to the agenda, that's
20 towards the end, because we have a short
21 presentation and slides to show you. Then we will
22 be happy to take your questions. And then after
23 that you can make a statement for the record. We
24 would like to limit it to three minutes to make sure
25 that everybody has a chance to make a comment, and
1 if we have a little more time after that we will see
2 how it goes. We want to make sure that we get
3 everybody's comments and questions taken care of.

4 If you signed in, we appreciate it if you
5 did. If you didn't, we would like you to. That way
6 you are on our mailing list. And we do cross check
7 you to make sure that we have your current mailing
8 address and that way you will get all of our
9 informational pieces we put out every so often. And
10 they are all posted on line, too, so if you don't
11 want pieces of paper coming to you, everything is on
12 our website.

13 So one of the pieces that we picked that

14 you probably picked up and/or got in the mail was
15 this piece here (indicating), and it outlines our
16 proposal; and inside there there is a form that you
17 can turn in for a written comment. If you don't
18 like to speak before a room full of people and you
19 just want to hand this to somebody, anybody pretty
20 much with a name tag on your way out will take
21 those, and those will also be for the record. You
22 can mail those in, you can fax it in, you can
23 comment on line from our website. There is an
24 electronic form you can send to us. It comes
25 directly to Jim and I. And all the comments will be
1 looked at and they will be addressed and put
2 together in what we call a Responsiveness Summary.
3 And that's attached to our final document that will
4 outline the cleanup plan that we'll go with, and
5 that's called a Record of Decision. In this case it
6 will be Amended Record of Decision.
7 Jim will talk a little bit about the
8 proposed plan and what our recommendations are.
9 And at this point it is just a recommendation, and
10 that's why we are here, to let you know what we are
11 thinking about and take your questions and your
12 comments and use all that feedback to make a final
13 decision. So I'll turn it over to Jim. Hold your
14 questions till we are done. We appreciate that.
15 JIM HAHNENBERG: Thank you, Sue. And
16 thank you for coming out tonight. Cold December
17 night. I'll try and keep my presentation fairly
18 short so that I'll try and give you the essentials
19 of kind of the outline of the proposal to be sure
20 that people have a basic understanding of what we
21 are proposing. It is in the Fact Sheet, as Sue
22 mentioned. So, with that, I'll proceed.
23 So the current plan, which was from our
24 Record of Decision of 2002, is for dredging and
25 disposal of all PCB-contaminated sediments in Little
1 Lake Butte des Morts that exceed one part per
2 million of concentration.
3 In that decision, we did have what we call
4 a capping contingency. What that was was it allowed
5 the possibility of some capping in the lake with
6 certain restrictions. It was found that it would be
7 cost-effective and still protective. In that
8 decision it was indicated that it was thought that
9 the capping would be protective.
10 The proposed plan that we will talk about
11 tonight is similar in some respects to the original
12 plan, but it changes from an all-dredging remedy to
13 a partial dredging, capping, and sand cover remedy.
14 We would still have about half the volume and the
15 areas would still be dredged. We will actually
16 remove about three-quarters of the PCB's that would
17 be removed under the original plan. The remaining
18 25 or so percent of the PCB's in that one part per
19 million footprint would be capped or would have sand
20 covers placed over them. The plan, the new plan,

21 the proposed plan, also does require long-term cap
22 maintenance and monitoring. And that would be
23 required under this remedy to make sure that we
24 monitor the cap to confirm that it is in place and
25 remaining effective.

1 This slide is kind of a summary of the
2 different scopes of the different actions. From
3 dredging, you can see we would dredge around 216
4 acres and would remove 1,900 pounds, about 2,500
5 pounds of PCB's. So that would be around almost
6 three-quarters of the PCB's would be removed under
7 this plan of dredging. The remainder would be
8 capped, an engineered cap, and the caps would be six
9 inches of sand and seven inches of armor stone. And
10 the engineering for the cap was such that the
11 evaluation informed us what was necessary to make
12 sure that this cap would remain in place even under
13 storm events; propeller wash if a boat came along,
14 to make sure they did not disrupt the cap; and also
15 the potential for ice scour.

16 There would also be sand covers over the
17 concentrations that are just above the one ppm
18 action level, which means one to two parts per
19 million, we would put sand covers down in those
20 areas as well. And sand covers comprise -- PCB's in
21 those areas comprise a little over two percent of
22 the total amount of PCB's in the one part per
23 million footprint. So it would be a relatively
24 small portion of the PCB's and only in very low
25 concentrations.

1 This is a map that shows where we would do
2 capping, where we would do dredging and sand covers.
3 The purple shows the dredge areas, and the blues
4 show the engineered caps, and this cap would have
5 six inches of sand and seven inches of armor stone.
6 And I don't know if you saw the display in the
7 lobby, but there is a plexiglas tube there that
8 shows what these caps would consist of. If you saw
9 it, you can see the black sediment underneath the
10 bottom and then the sand, which is the course sand,
11 and then the armor stone, which is gravel and a
12 little bit larger rocks as well. The yellow and
13 orange areas in this map show where we would have
14 sand covers. And it's hard to see, but the dark,
15 kind of dark brownish areas of these maps show where
16 we would dredge we would also need to put down the
17 sand cover to make sure the concentrations overall
18 in the lake would be low enough to meet our cleanup
19 objectives.

20 There are a number of things in this
21 proposal that do not change from the original
22 remedy. One is, the most important consideration,
23 is that this is a protective remedy of people and
24 the environment. Secondly, there is substantial
25 dredging. As I indicated, about half the area would
1 still be dredged. Most of that's already been done.
2 We would remove about three-quarters relative to the

3 current plan.
4 This plan actually would remove everything
5 that's above 50 parts per million, what we call Tosk
6 (phonetic) in Superfund lingo, which is a regulation
7 that regulates PCB's. And that's actually already
8 been done, the dredging to date, which, by the way,
9 I should mention that the dredging that's been done
10 in the Lake Butte des Morts since 2004 has actually
11 removed 335,000 cubic yards of sediment, which is a
12 very large dredging project. In fact, that alone
13 would be one of the largest dredging projects in
14 this country. And in the Fox River in general,
15 since we have been doing the remediation, we have
16 had to remove a total in the river of 550,000 cubic
17 yards of sediment totally from the river. But in
18 Little Lake Butte des Morts, since 2004 we have
19 removed around 235,000 cubic yards.
20 Some of the things that don't change, we
21 will continue to still have long-term monitoring of
22 the fish in the surface water. This is in addition
23 to the depth monitoring. And what this tells us is
24 it tells us what's actually going on for the
25 important environmental indicators. So we just
1 don't take it for granted that we are achieving good
2 results by physically achieving what we think we
3 need to do; but we also monitor the fish in the
4 surface water to anticipate observing declining
5 concentrations in the fish in the surface water.
6 The cleanup standards don't change this
7 proposed plan also. We would still have an action
8 level of one part per million. What that means is
9 every place there is a concentration of more than
10 one part per million something will be done. Either
11 it will be dredged or it will be capped or it would
12 be covered.
13 Finally, the average surface concentration
14 in the sediment in Little Lake Butte des Morts would
15 need to meet the 0.25 ppm standard. So once we are
16 done with the remedy, the concentrations in Little
17 Lake Butte des Morts on average in the surface would
18 be 0.25 ppm. And that was a number that, in the
19 risk assessment back in 2000 we determined that that
20 was the necessary concentration to be protective for
21 many ecological receptors and to achieve good
22 results relative to human health, although we still
23 have to rely on some time for additional recovery to
24 get even better results. But that would start us on
25 the right trail.
1 The basis for this proposal. People say
2 well, why are you proposing something different here
3 than you did before? The reason we are proposing
4 something different is because we have learned a lot
5 since we had the original Record of Decision. The
6 companies working on the Lake Butte des Morts
7 actually took over six thousand samples in the lake,
8 new sediment samples, and this compares to about 539
9 samples that was done for the original decision. So

10 it's more than ten times the number of samples that
11 were taken from the lake, which would give us a much
12 more precise understanding of where the
13 contamination is and, also, a better idea of kind of
14 how to go about doing the cleanup.
15 We took actually about one sample per acre
16 in some areas and one sample per two acres in other
17 areas. This allowed us to really find exactly where
18 we dredge. Under this evaluation we did determine
19 that there was a greater volume that does need to be
20 dredged in the current plan. And one of the main
21 reasons for this additional volume of sediment was
22 because the need to do what we call overdredging.
23 What that means is, if you have one part per million
24 concentration down to a certain level that's one
25 foot down, you need to go about another four inches
1 to make sure you get everything above the one part
2 per million concentration out. On average, we do
3 have about a one-foot thickness in the Lake Butte
4 des Morts. So you think four inches doesn't sound
5 like a lot, but if you are only dredging a foot, you
6 are adding four inches of sediment that need to be
7 removed, it adds a very large amount of volume
8 relative to the whole project. So that's another
9 determination that came out of the evaluations and
10 the new data.
11 Finally, I mentioned all the dredging we
12 have actually completed on the Lake Butte des Morts,
13 and from that experience we learned a lot about what
14 dredging can do and what dredging cannot do. What
15 we have learned from that is dredging alone will not
16 allow to us meet our cleanup objectives. We cannot
17 get down to 0.25 by just dredging. So we have to do
18 something besides just dredging in order to get to a
19 low concentration of sediment.
20 In addition to that, of the capping
21 projects since the Record of Decision, the decision
22 in 2002 for the Little Lake Butte des Morts, since
23 that time, a lot of other dredging projects have --
24 excuse me. Other capping projects have continued to
25 be done and, also, we have gotten additional
1 information of these other capping projects which
2 inform us that these other capping projects can
3 effectively contain contaminants. And these other
4 capping projects have been done under a wide variety
5 of environments.
6 There have been three projects in this
7 country, environmental projects, that have been done
8 by EPA or Army Corps of Engineers. And from those
9 projects we have determined that capping can be
10 implemented without a lot of disruption in the water
11 bottom, without a lot of mixing up the sediments,
12 and it can effectively contain the contaminants.
13 These other projects have been done in a wide
14 variety of conditions. These have been done in
15 harbors, estuaries, rivers, and some even in the
16 deep ocean, which are somewhat less permanent, but

17 quite a wide variety of conditions.
18 The importance of that is that all these
19 different conditions, all these other kinds of
20 sites, have allowed us to observe caps under a wide
21 variety of conditions, such as high water flow
22 velocity, potential for ice scour. In fact, there
23 was one project where there was some ice scour. It
24 was not armored and we had not looked at the
1 ice scour was an issue and it did disrupt the cap,
2 then an evaluation was done for that project to
3 determine under what conditions you might expect ice
4 scour. And we have applied those lessons on this
5 project to make sure that we looked at these, all
6 these different considerations to make sure that any
7 caps that are in place consider all these processes
8 to make sure the caps we put in are going to be
9 stable and effective to contain the PCB's on a very
10 long-term basis.
11 And these are just some pictures of the
12 dredging project that's been going on with Little
13 Lake Butte des Morts since 2004. I mentioned we've
14 learned a lot in terms of what dredging can do and
15 kind of the ins and outs of the operation. We got a
16 lot done here and have gotten about 70 percent of
17 the PCB's out to date. And that's what this slide
18 essentially says.
19 Some points I made already, that we have
20 removed a large portion of the PCB's out already.
21 We have about 30 percent of the PCB's still
22 remaining. Under this plan we went through some
23 additional dredging, but we would be doing
24 additional capping as well.
25 And, again, to reiterate in terms of the
1 caps, we have considered a variety of processes that
2 are important relative to the stability of the caps.
3 And these really boil down to a number of items, and
4 these are: Storm events and waves, these are things
5 like propeller wash from boats, and potential ice
6 scour. All those need to be evaluated very
7 thoroughly by experts in the field to make sure that
8 any caps that may be put in place would be stable
9 and would be a relatively permanent fixture.
10 We also did look at potential for
11 groundwater. The concern is you might have
12 groundwater moving through the cap, pushing
13 contaminants through the cap. So we did look at the
14 potential for groundwater moving through the cap,
15 and we have found that it's highly unlikely. And
16 the reason is because we don't -- the strong
17 evidence suggests that there really is no
18 significant upward movement through a cap from the
19 groundwater. One reason for this is the dams that
20 have actually created artificially high water levels
21 in the lake and cause the hydrologic conditions such
22 that it would be more likely to have downgrading
23 than upgrading because of the artificially high lake
1 design. You can see at the bottom, this is the

2 contaminated sediment. Then we would have six
3 inches of sand and seven inches of armor stone. In
4 the lobby we have a model of sorts of a plexiglas
5 tube which shows you the actual materials that would
6 be anticipated to be used for this kind of a cap and
7 gives you an idea of concretely exactly what we are
8 talking about.

9 The advantages of the proposed plan is,
10 one thing, with less dredging and less
11 over-dredging, really for the cleaner material, we
12 would use less landfill capacity; this remedy would
13 have a lower cost; and, more importantly, the last
14 three items are it would allow us to complete the
15 work sooner and have fish recovery and environmental
16 recovery in general to occur sooner. And we would
17 have lower concentrations in the surface sediment
18 afterwards in this project than from an all-dredging
19 project. Finally, this is commonly protected to the
20 current plan and would be protective.

21 With that, I turn it back over to Sue, and
22 we can have the questions.

23 SUSAN PASTOR: If you have a question,
24 raise your hand and we will call on you. We have
25 microphones down here, so if you could come down to
1 the microphone and then the court reporter will be
2 able to hear you better. If you'd state your name.
3 For sure for the comments portion of the meeting we
4 will want you to state your name and spell it for
5 the court reporter's benefit. But if you want to
6 tell us who you are and who you represent for Q and
7 A, that would be fine, too. So who has a question?
8 Come on down. And if she can't hear you or
9 understand something, she may have to stop you.

10 PENNY BERNARD SHABER: I am Penny Bernard
11 Shaber from Appleton. And, Jim, I have a question
12 about, you said that the PCB levels that you found
13 in your extra studies were higher so that dredging
14 would not take us to a safe level. Why will
15 covering that up make it any safer?

16 And the other question I have is about the
17 armor stone. I've had armor stone in my driveway,
18 and I see gullies in that when there is a huge rain
19 storm. I've seen armor stone in other places where
20 there are gullies that are developed. And, also,
21 I've seen where armor stone does not allow anything
22 to grow over the armor stone. So how can that not
23 disrupt the bottom of the river?

24 JIM HAHNENBERG: The first question
25 related to the concentrations after dredging.

1 Actually, concentrations aren't greater. We didn't
2 find concentrations significantly greater than we
3 had known about. But what we did discover from the
4 dredging is that we can't get everything out that we
5 want to get out in terms of getting to a lower
6 concentration. The reason for that in many cases is
7 because you have a hardpan clay underneath the
8 contaminated sediments and it's very difficult to

9 dredge to remove everything within this little layer
10 we can't quite get out.
11 So in those areas it's very difficult, if
12 not impossible, to get down to a very low
13 concentration. That's why we have higher
14 concentrations remaining after dredging. What that
15 means is, then, we really can't, in dredging alone,
16 get to the lower enough levels that we want to get
17 to. So that's why in those areas we would have to
18 place some sand.
19 The reason capping gives you a better
20 result, having the sand covers relative to dredging,
21 is because, once you are done with the dredging
22 project, even with sand covers, or maybe not in some
23 areas, but even in the sand covers you end up with
24 some PCB's in that layer. Whereas, in the caps, you
25 end up with a very clean layer once you are done.
1 Actually, you would have no PCB's at all in that top
2 layer, as well as the sand cover. So that allows us
3 to get a lower concentration once we are done in the
4 surface sediments.
5 Of course, that does rely on the caps,
6 making sure that they do stay in place and do remain
7 a stable feature to permanently contain the PCB's.
8 And the way we make sure that those caps will remain
9 in place and will be stable is we do look at all
10 those processs I mentioned to make sure that they do
11 contain the PCB's. Besides that, besides the
12 engineering which we believe will create stable
13 conditions with the cap, but just as like a belt and
14 suspenders, we will also have monitoring to make
15 sure that we monitor those caps that they do, in
16 fact, stay in place and do remain effective. So
17 it's really a two-pronged approach: One, the
18 engineering tells us that they will remain a stable
19 feature and will stay there; but, just to be extra
20 sure, we do monitor those caps. And, if there do
21 appear to be problems, then we would do whatever
22 maintenance would be necessary to maintain those
23 caps.
24 SUSAN PASTOR: Who else has a question?
25 Come on down.
1 DALE SHABER: I'm Dale Shaber. I live in
2 Appleton. Jim, in your proposal, you mentioned that
3 there was going to be you mentioned now, answering
4 my wife's question, monitoring and maintenance will
5 be included. What's the time line for that? What
6 happens if, let's say, 20 years down the road that a
7 cap doesn't last? Where is the money going to come
8 from to take care of that? That's one question.
9 The other one is: How long is this
10 monitoring and maintenance going to be? Is it going
11 to be forever? What's the time line involved?
12 JIM HAHNENBERG: I'll just tell you the
13 schedule that would be anticipated for the
14 monitoring. We would -- of course, after we had the
15 caps in place, we would make sure that they were put

16 in place as we designed them to be. Then we would
17 have additional monitoring two years probably and
18 then four years and then every five years
19 thereafter.

20 DALE SHABER: You said hereafter. Is that
21 forever?

22 JIM HAHNENBERG: As long as the
23 contaminants are in place and the caps need to be
24 there, the PCB's are still there and at above
25 concentration, that could pose a threat, the
1 monitoring would continue, however long that would
2 be.

3 DALE SHABER: So we could say forever?

4 JIM HAHNENBERG: One could say that.

5 DALE SHABER: If the PCB's are there.

6 JIM HAHNENBERG: There would be no time
7 limit. It would be however long is necessary. Who
8 would pay for it? It would be the companies paying
9 for the cleanup would also have to pay for
10 monitoring. That would continue as long as
11 necessary.

12 DALE SHABER: So is the money, then, for
13 that maintenance and monitoring going to be given to
14 EPA now? Because there is cost savings.

15 JIM HAHNENBERG: Well, any agreement that
16 we would have with the companies for doing the work,
17 we also in that agreement have what we call
18 financial assurance. What that is is that's the
19 assurance from the companies doing the work that
20 basically make sure that the money is available to
21 implement the remedy. That's part of the agreement
22 that we would have with companies to make sure that
23 the money will be there to perform the remedy.

24 DALE SHABER: So, in other words, that
25 money will be there until the PCB's are still in the
1 river.

2 JIM HAHNENBERG: Correct.

3 DALE SHABER: So, in other words, forever,
4 almost. Until sometime --

5 JIM HAHNENBERG: Forever is a long time,
6 but for a long, long time, yes.

7 DALE SHABER: So what I am saying is, I
8 just want to understand that, if you talk about
9 monitoring and maintenance, it's going to cost money
10 to do that. I just want to make sure that there
11 have been -- and you've mentioned to me some ways of
12 making sure money will be available. Because I
13 would really be very disappointed if that
14 responsibility then would go to the citizens of
15 Wisconsin to take care of a problem that should have
16 been taken care of now.

17 JIM HAHNENBERG: Well, it should not
18 happen. We have legal tools to make sure that that
19 doesn't happen. As I said, we would have a
20 financial assurance provision which would make sure
21 that the companies would be able to provide the
22 funding necessary for the remedy. And that would be

23 part of the remedy, certainly.
24 DALE SHABER: Thank you.
25 UNIDENTIFIED AUDIENCE MEMBER: I was going
1 to ask the same question that he was going to ask,
2 but I want to go further with that as to what kind
3 of problems have you studied that have already
4 happened with capping that have been done other
5 places? And, when you have studied these problems,
6 whatever -- I'd like to know what you have seen
7 happen. What is your plan of action to take care of
8 some of these things? In other words, what do you
9 expect may happen? What are the risks and what
10 would you do? Thank you.
11 JIM HAHNENBERG: Thank you. We actually
12 don't anticipate that there would be any substantial
13 damage to the cap. But, if it did happen, then the
14 cap would be repaired. Probably you would add sand
15 and gravel or maybe increase the armor stone
16 perhaps. If worse came to worse, as it became
17 apparent that the cap simply was not going to be
18 able to remain in that area, then you could remove
19 the cap and the sediment underneath.
20 Other projects where we have seen erosion
21 of the caps is there is the Grass River in New York
22 on the St. Lawrence Seaway. There was an ice scour
23 event, I mentioned that earlier, and that was an
24 event that did cause some damage to the cap. The
25 cap was not armored, and, actually, that cap was put
1 in place not necessarily to be a permanent cap. It
2 was really more of a placement test of the
3 materials. But it was still -- it was a good piece
4 of information that informed the agencies things
5 that might happen to a cap related to ice scour.
6 And so the agencies have taken that lesson
7 to heart, and, therefore, in these projects we
8 looked at ice scour to make sure that if there is a
9 potential for ice scour that might create conditions
10 where it just isn't feasible to put a cap, then we
11 wouldn't cap. In the Dumington (phonetic) area
12 where we had a similar decision and there were areas
13 down there where we looked at ice scours, it looked
14 like ice scours could be an issue with the cap. In
15 those areas we didn't cap, we dredged it.
16 In Little Lake Butte des Morts, it's a
17 different set of conditions. It's really more
18 lake-like than a river. In Little Lake Butte des
19 Morts, we did do a very thorough ice scour analysis
20 by an expert who used to work for the Army Corps of
21 Engineers, one of the preeminent experts in the
22 field, and his analysis told us that ice scour in
23 Little Lake Butte des Morts would not be expected to
24 be an issue, that it would not in this area create
25 conditions that could disrupt the cap.
1 So we did look at that, as I indicated,
2 other possible disruptive factors. There is also up
3 in Peninsula Bay a project where they really
4 anticipated it, whereby there is propeller wash from

5 like tug boats. They anticipated that they would,
6 in fact, erode a cap, and it did. But that was
7 known likely to be an effect.
8 And that is another issue that we did look
9 at here. We did extensive work and evaluations to
10 look at propeller wash, erosion potentially, from
11 vessels that might operate in Little Lake Butte des
12 Morts. And out of that analysis it told us that you
13 needed a certain size stone to make sure it would
14 stay in place. And that actually turned out that
15 that related to the water depth as much as anything,
16 and that, in shallower water, where you have
17 propellers that might be closer to the cap, they
18 would exert a much more powerful influence.
19 Therefore, on this project, we are only
20 capping out from the central part of the lake, for
21 the most part. In fact, wherever we would cap, we
22 would need at least six feet of water once we were
23 done. And we would not cap in areas where you would
24 have less than six feet of water. What that does is
25 it allows you to cap in areas where you would be
1 less likely to have any significant influence from
2 the propeller wash.
3 So we looked at all those things, other
4 processes that have, in fact, impacted other capping
5 projects, and we have looked at those in great
6 detail, very rigorously, using modeling and actual
7 results in other projects to make sure that our
8 design is a good one and that our caps would remain
9 stable.
10 SUSAN PASTOR: Okay. Someone else have a
11 question? Yes, sir.
12 ROGER CANT: My name is Roger Cant from
13 Menasha. Just to follow up on the other comments
14 here. One of the other thoughts is, in putting the
15 cap on, in the case of where you find out that it's
16 not effective, for whatever reason, there is a cost
17 to repair it, replace, whatever. Might it be that
18 that possibly could exceed the cost of the original
19 project if, for whatever reason, taking the stuff
20 out is harder than just dumping on top?
21 JIM HAHNENBERG: We don't think so. Based
22 on our analysis, the caps would be stable. And,
23 while it's possible there could be some small areas
24 you could have some erosion of the cap, our analysis
25 tells us that that should not happen and that, if
1 there were any problems with the cap, it would be
2 very localized and relatively minor. And that the
3 cost of that would not exceed, by any means, what
4 the current proposal would cost. So that shouldn't
5 be an issue.
6 There would be money that would be
7 available, though. If there was some maintenance
8 that was required, it would be done. But, based on
9 other projects, we haven't seen that as a major cost
10 issue, even when other caps might need minor
11 maintenance. But that would be -- the money would

12 be available to do that, and, based on our analysis,
13 that wouldn't be a significant cost. It really
14 wouldn't create a major problem in that regard.

15 SUSAN PASTOR: Someone else have a
16 question? Yes, ma'am.

17 RAYANNEN BENTLEY: I am Rayannen Bentley,
18 and I represent the University of Wisconsin Fox
19 Valley Students Association, as well as the Campus
20 Activities Board. And I didn't hear you address the
21 first woman's question about nothing being able to
22 grow on top of the cap. And then I have another
23 question after that.

24 JIM HAHNENBERG: Well, that's sort of a
25 habitat question. But the stone on top of the cap
1 would be a different substrate than what is there
2 currently. You would expect to have some deposition
3 naturally over the cap from natural sedimentation,
4 so that it would restore some of the conditions.
5 But one thing to keep in mind is that there would be
6 200 acres that would be affected by this cap out of
7 about 1,400 in the lake, and it would be in areas
8 that would be out in the central part of the lake.
9 So we don't think the habitat would be a major
10 issue. And you are going to get some recovery,
11 also, in that area. Over time you would get some
12 deposition out of that to create some recovery in
13 terms of the habitat.

14 RAYANNEN BENTLEY: Then my second question
15 is: You say that this is going to be a relatively
16 permanent cap and that it will be in place for a
17 long time. But then how long have the caps that you
18 have studied and the problems that you have studied
19 been in place for if we are talking about a
20 semi-permanent condition?

21 JIM HAHNENBERG: Environmental projects,
22 caps were first being installed in 1978. So it's
23 been nearly 30 years that they have been in place on
24 these projects. So we have 30 years of information
25 to tell us that they have been effective in
1 containing contaminants. And there have been many
2 events on these projects over time to inform us that
3 these caps, in fact, can resist these kinds of
4 events and shown us that we would expect them to be
5 stable over a long time period of -- a long time.

6 SUSAN PASTOR: Who else has a question?

7 REBECCA KADERS: Rebecca Kaders from Clean
8 Water Action Council in Green Bay. I just have one
9 question, really. That is: Isn't it true that
10 two-thirds of the citizen comments you received on
11 the last plan were opposed to capping? You said
12 that last spring, and Congressman --

13 JIM HAHNENBERG: Maybe in that ballpark.
14 I don't remember exactly the number, but yes, there
15 were a substantial number of comments that were not
16 supportive of the proposed plan, which is similar to
17 this one.

18 REBECCA KADERS: And isn't it also true

19 that people have repeatedly asked you not to
20 schedule these public hearings right before
21 Christmas?
22 JIM HAHNENBERG: That's why we tried to
23 not crowd the holidays any more than we need to. We
24 started the comment period in November, and we
25 wanted to give people some advance notice from the
1 start of the comment period. So I know your
2 organization likes to have a little extra time once
3 we announce it to give your members notice and for
4 you to arrange your needs. So we were trying to
5 accommodate those kinds of considerations as well as
6 not crowding the holidays. So we tried to schedule
7 it so that it was not any closer to the holidays
8 than we needed to.
9 REBECCA KADERS: This is right in the
10 middle of final exams for students, teachers
11 wrapping up the semester, people are getting ready
12 for the holidays. This is about the worst possible
13 time of year to hold a hearing on this.
14 SUSAN PASTOR: Actually, I've never had
15 that complaint other than from you. I haven't had
16 anybody call and say that.
17 REBECCA KADERS: That's nonsense. I've
18 heard it myself at these same hearings.
19 SUSAN PASTOR: Well, we had 270 people
20 come to our meeting last year and we had 600
21 comments. So I'm inclined to agree at the
22 beginning, but it looks like people came through and
23 came to the meeting, called us, e-mailed us, faxed
24 us. We had a really rousing response from people
25 over the phone, via e-mail, via paper mail. And I
1 answered all of them. And I really don't get that.
2 Which is another reason why we extended the comment
3 period even longer than 60 days, and we seemed to
4 still get a very good response and turn-out.
5 REBECCA KADERS: This is a low turn-out,
6 given the importance of this tonight. People no
7 longer have any faith in your listening to them.
8 SUSAN PASTOR: Anyone else have a
9 question?
10 PENNY BERNARD SHABER: Penny Bernard
11 Shaber again. To follow up on Becky's question,
12 isn't community acceptance of the plan supposed to
13 be a large part of approval of the final plan? And
14 then I have a follow-up question.
15 JIM HAHNENBERG: Yes, it is. It is what
16 we call modifying criteria. The comments that we
17 receive, the consideration that we give various
18 weights to are comments that would tell us if the
19 plan would not be protective, would not be
20 implementable, would not be what we call consistent
21 with our laws and regulations, would not be
22 effective in the long-term, would not be effective
23 in the short-term. And there are a couple of
24 others, but basically those are the considerations
25 that we look at. If there is a comment that tells

1 us that the remedy -- demonstrates to us clearly
2 with compelling information that tells us the remedy
3 would not be protective, then we would give great
4 weight to that comment. If we get a comment that
5 just simply says we don't like capping, I mean
6 that's not a lot we can react to, other than, I
7 mean, thank you for your comment. But we have to
8 have a technical basis to make our decision. And
9 that's what we look for in our comments. It's not a
10 voting procedure, it's a comment where -- it's a
11 comment process that is seeking comments that inform
12 us on issues that may pertain to implementability or
13 effectiveness or protectiveness of the remedy. So
14 those are the comments that are of the greatest
15 influence.

16 PENNY BERNARD SHABER: But community
17 acceptance is not a technical thing. Community
18 acceptance is a subjective personal opinion that
19 should be weighted also, because we live in this
20 community, and we need to be sure that this
21 community will be safer than it is right now. So
22 if you think that community acceptance is important,
23 then I don't believe that it should be weighted
24 differently than the technical information, because
25 community acceptance is not technical, other than
1 it's more than the number of people oppose it than
2 the number of people support it, then that's
3 technical and that's true. If two-thirds of the
4 people said don't do this, that should tell you a
5 lot.

6 Then my other question is about the river
7 is becoming much more a part of the communities
8 now-a-days. The river has been ignored for a long
9 time and people have not used it actively and there
10 has not been development active along the river.
11 And now there is. There is a huge interest in this
12 river. And there is interest in increasing the
13 number of buildings along the river and increasing
14 the activity in the river. And if you are going to
15 be capping areas where eventually there may be a
16 need to further dredge because people want to use
17 the river, how will that work?

18 JIM HAHNENBERG: Well, when the caps are
19 being put in place in Little Lake Butte des Morts,
20 it would be in the central part of the lake, which
21 is the deepest part of the lake.

22 PENNY BERNARD SHABER: That's only about
23 six feet deep. It's not hugely deep.

24 JIM HAHNENBERG: The central part of the
25 lake, according to the maps I have seen, the central
1 part of the lake is 10 to 15 feet deep. And that
2 would be where most of the capping would occur.
3 Now, there are some areas along the edges that it
4 would be done, but, in any event, there would be no
5 areas where the water depth would be any less than
6 six feet in the capped areas.

7 PENNY BERNARD SHABER: So how will that

8 impact people if they decide they want to build
 9 along the river, which people are currently doing?
 10 And when they are building along the river, they
 11 want to have access to the river with boat houses or
 12 with a dock or with whatever. How will that be
 13 addressed?
 14 JIM HAHNENBERG: That wouldn't affect
 15 access to the river at all, because it would only be
 16 implemented in the deeper parts of the lake.
 17 And one thing, too, in terms of river use,
 18 the big advantage for this proposal in terms of
 19 river use is, once we are done, we would have a
 20 cleaner lake and we would have recovery of the fish
 21 population and improvement in the fish population.
 22 The fish population would be healthier, they would
 23 not be contaminated. Eventually we would hope to
 24 have consumption advisories reduced, if not
 25 eliminated, and that certainly would enhance the use
 1 of the river. So, from that standpoint, you would
 2 have great improvement in terms of the potential
 3 river use.
 4 PENNY BERNARD SHABER: That would also
 5 happen if you did the dredging and removal versus
 6 capping.
 7 JIM HAHNENBERG: The capping actually does
 8 get you there faster, and it also gives you a good
 9 result, a better result, really, in terms of
 10 immediately after dredging you would actually have
 11 lower concentrations -- excuse me. Immediately
 12 after the project would be done, you would actually
 13 have lower concentrations and a better environmental
 14 result post-implementation. So you would actually
 15 have a lower concentration under this proposal.
 16 That's one reason we believe that this proposal is a
 17 better approach.
 18 SUSAN PASTOR: Somebody else who hasn't
 19 had a chance to ask a question. Come on down.
 20 FRED STEENIS: When do we use the card
 21 with the number 18 on it?
 22 SUSAN PASTOR: That's during the comments.
 23 This is just open questions right now.
 24 FRED STEENIS: Okay. I might get into the
 25 comments, then, too.
 1 My name is Fred Steenis. I am in the town
 2 of Menasha, and I am a resident on the Lake Butte
 3 des Morts. I've got so many questions I would take
 4 up the whole night if I gave them all to you, but
 5 I'm just going to hit you with a couple of them.
 6 In the northwest bay of Little Lake Butte
 7 des Morts near Scoby Island, no dredging has been
 8 done and nothing has been done in that bay. About
 9 25 years ago, I had to clean out our boat channel
 10 due to the fact that they put in a treatment plant
 11 next door to my house and stirred all the mud, came
 12 all the way down and plugged up the boat channel.
 13 We had to get a permit. We got a permit
 14 just to dredge that channel. We had to remove all

15 of the muck that came out of that boat channel and
16 bring it down there on a separate barge, put it up
17 on the shoreline, and cap it because it was so full
18 of PCB's. That's what we did. We spent a lot of
19 money doing this. Now people tell me that they
20 don't have to do any dredging in the Little Lake
21 Butte des Morts west, northwest because it doesn't
22 have enough PCB's in it to do that. And you can't
23 cap it because you just got through saying that you
24 won't cap -- you can't cap -- you have to cap it
25 beyond six feet. Well, that whole bay is all, I'm
1 going to say, from five feet to no feet, and you are
2 doing nothing with it. What's the situation?
3 JIM HAHNENBERG: Specifically, I don't
4 know the exact concentrations in the area you are
5 talking about, but I would suspect that they are
6 below our action levels. If there is not any action
7 there, it would be below the one ppm action level,
8 which is what we say is the level that we think we
9 need to take action in order to have a protective
10 result for the project. So I am assuming that your
11 area, then, would be less than the ppm.
12 As far as other permitting processes, you
13 would have to talk to the State about that. That I
14 don't know about. In terms of what might be
15 required under the State permitting process, I don't
16 know. Unless somebody from the State would want to
17 address that one.
18 FRED STEENIS: When you did have your map
19 up or your Power Point up here earlier, I did notice
20 all the circles and so forth where you did dredge.
21 That whole bay is not even touched. And they did
22 come in there with their equipment and went all
23 along the shoreline and everything, right in front
24 of my dock and so forth, and checked this all over.
25 But nothing has been done with it. I don't
1 understand why that would be. Why is this?
2 Is it because perhaps the sewage treatment
3 plant is just south of my house? And the current
4 comes out of that plant which is supposed to
5 discharge to the center of the river, which is the
6 reason they originally built it, but they ran out of
7 funding so they had to dump it on the shoreline
8 instead of going out to the middle of the river. It
9 created all the muck and they put it in all the boat
10 channels and so forth. Are they planning on just
11 not doing anything in that bay because that's where
12 they are going to continue to discharge the sewage
13 treatment plant in that bay? Why should we clean it
14 up? Thank you.
15 BILL HARDING: Mr. Steenis, I'm Bill
16 Harding. I am the project manager. We had spoken
17 on the phone. And since I spoke to you, I was able
18 to talk to the engineers and the scientists that
19 went out and collected the samples. And, like Jim
20 mentioned, there are no high, elevated PCB
21 concentrations in that entire area. In fact, I do

22 have a printout and I will be happy to share it with
 23 you.
 24 FRED STEENIS: Then why did I have to take
 25 them out of there?
 1 BILL HARDING: I can't answer that. I
 2 have no idea what the PCB concentrations were at
 3 that time.
 4 FRED STEENIS: Okay. Blow me off.
 5 BILL HARDING: All I can do is give you
 6 the data that is currently available.
 7 JIM HAHNENBERG: Bill is the project
 8 manager working on the project for Little Lake Butte
 9 des Morts, for those of you who don't know. We do
 10 have newer data for the whole entire area of Little
 11 Lake Butte des Morts, and there is likely some data
 12 points in that area, and we would be happy to
 13 provide you with that so we know exactly what we are
 14 talking about for those concentrations that are out
 15 there. It sounds like they are under our action
 16 level of one part per million, which is not a level
 17 of great concern, at least not enough that we need
 18 to go in there and take them out or cap them or do
 19 anything.
 20 SUSAN PASTOR: Someone else have a
 21 question? Someone who hasn't asked one yet. Okay,
 22 you are on.
 23 UNIDENTIFIED AUDIENCE MEMBER: Jim, how
 24 long have those 30 capping projects actually been in
 25 place? Have any of them gone for a couple of
 1 decades, three decades? And do they actually
 2 involve northern rivers, flowing rivers?
 3 JIM HAHNENBERG: Some do.
 4 UNIDENTIFIED AUDIENCE MEMBER: Name them.
 5 JIM HAHNENBERG: The Wannish (phonetic)
 6 River is one.
 7 UNIDENTIFIED AUDIENCE MEMBER: No, they
 8 have not had a capping in that river, not a
 9 successful one.
 10 JIM HAHNENBERG: The Wannish River they
 11 have.

Agencies followup to discussion above.

On Attachment 1, page 68, the Duwamish Waterway, Seattle Washington project is listed as one of the successful capping projects. This project is discussed in greater detail in the, "Duwamish Waterway Capping Demonstration Project: Engineering Analysis and Results of Physical Monitoring," by the U.S. Army Corps of Engineers, March 1986. Additionally, at least five other river capping projects are listed in Attachment 1, page 69 as follows:

1. Sheboygan River/Harbor, Wisconsin;
2. Wausau River Site, Wisconsin;
3. Manistique Capping Project, Michigan;
4. McCormick and Baxter, Portland, Oregon; and
5. Mill-Quinniapiac River, Connecticut.

12 UNIDENTIFIED AUDIENCE MEMBER: No. I
13 talked to the people at the Wannish River, the
14 citizen groups that were monitoring the situation
15 there, and it's not a cap in the river. It's
16 downstream, it's in a bay area. It's not in the
17 river itself.

18 JIM HAHNENBERG: Well, I can tell you
19 this. There have been capping projects that have
20 been done since 1978. Many of them, not all of
21 them, but many of them have been monitored
22 extensively, and what the monitoring has shown is
23 that these caps are effective and contain
24 contaminants. These projects have been done in a
25 wide variety of environments with similar processes
1 -- well, actually the same processes as what we are
2 talking about.

3 And what's most important is, when you are
4 looking at these projects, you have to consider what
5 are the processes that are potentially influencing
6 the caps in terms of water flow, in terms of prop
7 wash, in terms of ice scour, those kinds of
8 processes. You have to look at those and then
9 evaluate those relative to whether a cap is
10 implementable, whether it could be expected to be
11 stable. And then, if it is a reasonable candidate
12 for capping, then you design for those conditions to
13 make sure that the cap will remain stable over the
14 long-term.

15 And the way you do that is you have large
16 enough stone on the top of the cap to make sure it
17 doesn't move. And you have other things you need to
18 do in terms of the certain thickness of sand
19 relative to making sure you contain contaminants.
20 So you have to look at all those things and then
21 design a cap to make sure it will be effective. And
22 that's what we've done.

23 Every river is going to have different
24 conditions anyway, so you always have to look at all
25 those kinds of considerations regardless of the
1 situation, whether it's a river, an estuary, a
2 harbor, or whatever. And that's what we have done.

3 UNIDENTIFIED AUDIENCE MEMBER: I'm sorry,
4 but I have heard different stories related to these
5 projects that are not as glowing as the ones you
6 tell.

7 JIM HAHNENBERG: Well, you can submit that
8 as a comment. Do you have data on --

9 UNIDENTIFIED AUDIENCE MEMBER: Who is
10 listening? Who's listening? You've already made up
11 your minds. That's the whole point.

12 SUSAN PASTOR: Do we have any other
13 questions? Yes, ma'am.

14 KATHLEEN MEYERS: Yes, I have several,
15 seeing as I am a victim of your PCB's. Many people
16 are victims in Wisconsin. I would like to know from
17 way back when I started with my research project and

18 had lunch with the federal government because the
19 health issues were not allowed to be presented out
20 to the public. Those were hushed. Okay? And I had
21 my life threatened, not that it matters, because
22 it's a hot issue. Back in time.
23 Back in time what we did is you guys
24 covered up a petition by a hundred signatures when
25 it was -- the baby was beginning for the profits
1 that are ongoing, while the people are becoming
2 deathly ill, and there are no cures.
3 Another question, or another concern of
4 mine, I should say -- I'm not going to ask you guys
5 questions because I already know what your payoff
6 is. And it was horrifying to hear that you just
7 said that it's going to be an indefinite project
8 when at one point in time it was supposed to be a
9 Superfund. By the way, I bought in on that meeting
10 with some of my research with lunch for a payoff to
11 get in on hand picked only at the Paper Valley
12 hotel, which I will not forget, because I have the
13 papers in my packets at home. And it was
14 interesting, because the only reason I went there
15 was to see who the players were going to be for the
16 kickback with the money.
17 By the way, the taxpayers are paying for
18 this, if anybody is paying attention. Glatfelter
19 Corporation slipped out the back door. But another
20 thing is I took notes. Those books were at the
21 libraries for about eight months. If anybody wanted
22 a copy of all of them, it was about \$700, if I
23 reflect back in time. As I was sitting there for
24 three days taking notes, and everything I do has to
25 be referred back to from notes when it's in detail
1 from the memory losses from the auto-immunities that
2 I have had to live with. And believe you me, these
3 are very costly ventures with your health. And I'll
4 get into that a little later with my comments from
5 my previous researches on the health issues, which
6 were kept hushed to the public.
7 We live in the most highly toxic state in
8 the USA. There is 100 chemicals that run through
9 the waters. And if anybody is playing with the
10 dollar here, they are playing with lives on a
11 serious note and it travels a long distance, all the
12 way to Texas and across the waters to Norway, which
13 is why the scientists were in here from Norway back
14 when this started, to study our land, water, and
15 air. Likewise, they were in here from parts of
16 Europe. I got to meet the one from Europe and my
17 son got to meet the one from Norway at the time.
18 But all of this has been not an issue,
19 because we don't want to discuss the real issues,
20 which are people dropping over like flies from
21 serious cancers that are unbeknown to man, due to
22 the PCB's once they hit the fatty tissues and get
23 into the bloodstream and turn into poison. This is
24 real. Your death warrant is in Wisconsin. Why

25 would anybody want to stay here? Why?
1 And I have another comment when we had
2 that private meeting that I got in on.
3 SUSAN PASTOR: Is there a question we can
4 help you with?
5 KATHLEEN MEYERS: A question?
6 SUSAN PASTOR: Yeah.
7 KATHLEEN MEYERS: Okay. One is why the
8 public was shut out and there was a private meeting
9 called with the doctors and the hospitals. And that
10 was behind our back, because the public was never
11 allowed to know the seriousness of the health
12 issues. And I guess I probably would have to think
13 that the public would be shut out of the serious
14 notations that followed with those health issues.
15 And my brother is a big-time builder, and so I got
16 to hear the inside story about the deaths that took
17 place at our lovely Theda Clark hospital due to the
18 PCB's that were hushed to the public. And those
19 people would have lost their jobs if they would have
20 let that out. But I'm going to leave it up to the
21 public now, because that was another hush under the
22 table when people were dying from the throat, and
23 what happens from the PCB's when they hit the
24 glands.
25 SUSAN PASTOR: I don't think we have
1 answers to questions about doctor visits.
2 KATHLEEN MEYERS: I think this is very
3 serious, because it all has to do with health. The
4 animals, the fish, the people, we are all dying
5 here. And what I am telling you is these are very
6 costly operations which you all stand to gain a lot
7 of wealth from, except our lives are at stake.
8 Could any of us have that \$700 piece of
9 paper which is many pages long when the red levels
10 were in Green Bay? The red levels of contamination
11 were high off the charts in Menasha and in Little
12 Lake Butte des Morts, as I recall when I was looking
13 at the maps, other than the deathly, deathly high
14 contaminants of arsenic and poison that was sitting
15 in the waters and is still there and you will not
16 answer that question. And you will not tell the
17 truth about how it seeped into the waters.
18 And I went under cover and went to the
19 land dump site over at Sunnyville down the street
20 from where I lived at the time when the government
21 took the initiative to take over that land dump site
22 and not let the public know about that one and
23 threatened the guy that ran it that he would lose
24 his business if he opened his mouth. So he had to
25 shut up. And I was pretending I was looking for a
1 secretary that eight o'clock in the morning day to
2 see who the players were and what they were doing
3 over there.
4 Anyway, it's all been a lot of fun. Sixty
5 thousand dollars later my face got put back
6 together, and that's all been very interesting. And

7 all the tests that I could have done if I had a lot
8 more money to play with for the other ball park
9 players in the field, which are the physicians that
10 are going to reap the benefits off the serious
11 consequences. As I recall, going with the town of
12 Inland to help them with their lawsuits against the
13 state and federal government because they are all
14 making a ton of billions on long-term projects off
15 the taxpayers in the state of Wisconsin while they
16 are coming up with serious cancers unbeknown to
17 them. And they have to go outside the state, by the
18 way, because these cancers that come from PCB's are
19 ones we haven't seen before.

20 SUSAN PASTOR: We are going to have to see
21 if someone else has a question pertaining to our
22 recommended cleanup action. And, if you do, come on
23 down. Anyone else that hasn't had a chance to ask a
24 question?

25 Okay. Well, then I think we will go ahead
1 and move into the comment portion of the meeting.
2 And this is really for the benefit of the court
3 reporter and for us. If you picked a number, we
4 will go according to the numerical order. We would
5 like you to state your name clearly for the court
6 reporter so she can get it down properly for the
7 transcript. Spell it if it's a name that needs to
8 be spelled, if you represent a particular
9 organization.

10 If you have something in writing that you
11 want to give us for the record, too, that would be
12 fine. If you want to hand it to someone on your way
13 out, hand it to us. Or you can speak it and read it
14 for the record at the microphone. Since we probably
15 gave out a lot of numbers tonight, we ask that you
16 keep your comments to three minutes so that
17 everybody will have a chance to get a chance to say
18 what they want to say. And if we have a little
19 extra time we can go back and give everybody another
20 chance. But, for now, if you would keep them short,
21 we would appreciate it so that everybody can get a
22 chance to get their comment in. So who has number
23 one?

24 MIKE JURY: My name is Mike Jury. I'm a
25 professional engineer with CH2M Hill, which is an
1 engineering firm responsible for the OU-1 remedial
2 design under contract to WTM-1 Company, which is
3 formerly Wisconsin Tissue Mills. The design is
4 being performed under agreement with the U.S. EPA
5 and Wisconsin DNR.

6 I have been the OU-1 remedial design
7 project manager since the design started in
8 mid-2003. With my more than 30 years of experience
9 in environmental projects and OU-1 background, I
10 would like to make a few important points regarding
11 the OU-1 optimized remedy.
12 First a few facts about the PCB mass
13 that's being sand covered or capped. The total PCB

14 mass in the whole lower Fox River is approximately
15 25,000 kilograms. The total mass in the sediments
16 that we are going to sand cover, and these are the
17 sand cover that goes over undredged sediments, is 36
18 kilograms. So that's 36 kilograms out of the total
19 in the lower Fox River of 25,000 kilograms. That's
20 .1 percent of the total mass in the lower Fox River.
21 In other words, that's one one-thousandth of the
22 total mass that's being covered by these sand
23 covers.
24 Now, similarly, the total PCB mass
25 underneath the engineered cap is 229 kilograms,
1 which is 1 percent of the total mass in the lower
2 Fox River.
3 With regard to dredging under the proposed
4 OU-1 optimized remedy, by next summer we will have
5 dredged in the order of 400,000 cubic yards of
6 sediment. To give you an idea of what that is, if
7 you take a football field and you go goal line to
8 goal line, sideline to sideline, and go up 225 feet,
9 that's the volume equivalent to 400,000 cubic yards.
10 So we've done a lot of dredging. But dredging, as
11 we know from this project and other projects, has
12 its limitations. And we just can't get down to zero
13 PCB's with dredging.
14 And, as Jim has stated before, we can't
15 get to the .25 ppm surface weighted average
16 concentrations just with dredging. We have to do
17 something else, which brings us to the caps.
18 Engineered caps. We are confident that the
19 engineered caps are going to be protective and
20 permanent because of the conservative approach that
21 we've used in our design.
22 For the first part, we've already removed
23 the high concentrations of PCB's, so we only have
24 low concentrations to put our caps over. And the
25 other one, and Jim has mentioned this several times,
1 is that we are only going to cap to where we have at
2 least six feet of water depth over the cap when we
3 are done. And the deeper water provides extra
4 protection for the effects of boat propeller wash,
5 river current, wave action, ice flow, that type of
6 thing.
7 So, in summary, the proposed OU-1
8 optimized remedy is protective of human health and
9 the environment in the same manner as the original
10 remedy. Thank you.

Agencies Response

Thank you for your comment.

11 SUSAN PASTOR: Okay. Who has number two?
12 FAWN SCHILLINGLAW: My name is Fawn
13 Schillinglaw. All my life I have lived right on the
14 shore of the Fox River: In Kaukauna as a kid in a

15 house right on the river; at Lawrence College right
16 here on the river; and I've raised my children where
17 I still live now, in a house in Appleton, right on
18 the shore of the river. I know this river. It is
19 well used by the public: Jet skis, water skiing,
20 speed boats and so on. River development is now
21 actively promoted: New condos, gigantic houses, and
22 more and more docks constantly. There is bigger and
23 bigger boats. River use is increasing every year.
24 I'm 63. I know that. I've lived here all this
25 time.

1 This creates traffic and turbulence and
2 waves and erosion. I know that. We've lost a lot
3 of our shoreline, and we have quite a big lot.
4 There is a lot of sediment eruption. It's all part
5 of the progress in this area. And this has a lot to
6 do with capping or dumping sand and gravel as a
7 coverup over the PCB's. I call it a mixmaster
8 effect what's happening in the river in front of our
9 house because of the ever-increasing water traffic.
10 Especially if the lots open in the future, you are
11 going to even see more and more water traffic.
12 We have a marina in front of Sturby
13 (phonetic) Island, we have a marina in Lutz Park,
14 and the traffic level in front of our house is
15 dangerous. People in our area have tried to get a
16 no wake zone because of the safety concerns.
17 The water in this river moves. This sand,
18 in my opinion, is not going to stay put. High
19 water, there is water level changes in this river
20 all the time. I know that. It goes up and down all
21 the time. I go down to the river often. The ice
22 moves. The sand, in my opinion, is not going to
23 stay in place. I don't see, from what I have read,
24 that there is any proof of a similar use working
25 over time. And, as Jim has said, every river is
1 different. Conditions in the Fox River are going to
2 be unique. We don't know what's going to happen.
3 This is an experiment.

4 Now, there is a lot of talk about
5 monitoring, but I feel that monitoring is only going
6 to tell us when the movement of the caps finally is
7 going to cause a big problem and the PCB's are
8 uncovered, and then in the future, as there's been
9 other people here asking, who is going to be around
10 to foot the bill? Is it going to be the taxpayers?
11 Is it going to be us? That's why capping to me
12 seems only a cheap, fast cover-up of PCB's to get
13 the polluters off the hook as fast as possible. The
14 public should not be fooled by this plan. The only
15 right way to clean up our river is to get the PCB's
16 out of it, not cover them up for our grandchildren
17 to clean up.

18 I read a lot of the documents about the
19 word "averages." That certainly means to me that
20 some areas to be covered up are higher than average,
21 some may be lower. But an average is an average.

22 How high are some of these? How much different than
23 the average?
24 Also, I asked my husband before we left
25 tonight to read some of these documents. He's a
1 fisherman. He had some different opinions. He said
2 ask about the organisms in the water that will
3 burrow into these sand caps. He's concerned about
4 the fish eating what gets down through the sand. He
5 said consider a worm. Consider what's down in that
6 water that's living. This is a living body of water
7 with plants and animals and microorganisms in it.
8 What's going to get down in through that rock and in
9 through that sand and collect PCB's and bring it
10 out? Three inches of sand doesn't keep a worm out.
11 My family, my two sons, my little
12 nine-year-old grandson, always fish from our little
13 dock. We've never been able to eat one fish. Never
14 bring one up to the house and have a fish dinner.
15 What a shame. We have been a good community area
16 down here along the Fox River. We support and we
17 work many of the people in this area in the
18 industries that have polluted our river. They owe
19 it to our health to take their pollution out of our
20 river before PCB's are allowed to flow out into
21 Green Bay and Lake Michigan in the future. Consider
22 that. It can happen. Why should we take that risk?
23 Please get the PCB's out while we still
24 can. My dad, who is now dead, always used to say to
25 me, do a job right the first time. I say let's do
1 it right. Let's get the PCB's out of there. Don't
2 just cover them up. Thank you.

Agencies Response

Responses to these comments are addressed in Section 1, Agencies Response to Comment 1, page 7, above.

3 SUSAN PASTOR: Okay. Number three.
4 WALLY BERGSTROM: My name is Wally
5 Bergstrom. I live at 382 Lake Road in Menasha.
6 I'm a private citizen interested in clean water and
7 a realistic solution. My family has lived in Neenah
8 and Menasha for seven generations. I've lived and
9 worked in and enjoyed the water wonderland my whole
10 life. Testimony of that is a closet full of tackle
11 boxes and a number of boats used for runabout,
12 fishing, and hunting. As much as anyone, I'm
13 interested in a clean river and lakes for myself and
14 for our community's future generations.
15 I have been following the PCB issue as
16 long as it's been a public concern. Now, I think
17 all the folks that have been working on this
18 project, the GW partners, the Environmental
19 Protection Agency, the Department of Natural
20 Resources, have gained a wealth of data and actual
21 experience that makes them most expert in my

22 opinion, more expert as a result of the new data.
23 And I have no reason not to believe them.
24 These experts have devised a revised plan
25 based on these new facts, this actual experience,
1 that they call the OU-1 optimized remedy. This
2 plan, first and foremost, meets the original cleanup
3 standards. Furthermore, it's more efficient, it
4 occurs quicker to completion, and it's going to be
5 far less costly. And it's all down on paper for
6 everybody to understand. The OU-1 optimized remedy
7 is the better way, and we should all be for it.

Agencies Response

Thank you for your comment.

8 SUSAN PASTOR: Okay. Who has number four?
9 MOE BOHRER: My name is Moe Bohrer,
10 B-o-h-r-e-r. I'm with Michels Materials, Division
11 of Michels Corporation. I'm here to comment on the
12 sand and armor stone being used for the Little Lake
13 Butte des Morts Fox River remediation. Michels
14 Materials is the leading sand, gravel, and crushed
15 stone supplier in the state of Wisconsin, one of the
16 largest in the nation. In fact, we operate over one
17 hundred pits and quarries in the state of Wisconsin.
18 We also operate one of the largest quality control
19 departments in the Midwest. We have three permanent
20 and five mobile aggregate testing laboratories. All
21 of the materials we produce are strictly tested to
22 meet the requirements of the construction industry.
23 We are a crude supplier to the U.S. Department of
24 Transportation, the Departments of Transportation
25 for the state of Wisconsin and Illinois. And our
1 armor stone is one of the few armor producers that
2 are approved by the U.S. Army Corps of Engineers.
3 We at Michels Materials are confident of
4 our ability to produce not only the quantity but the
5 quality of the sand and armor stone needed to meet
6 the strict requirements of this remediation project,
7 and we are confident it can be done. Thank you.

Agencies Response

Thank you for your comment.

8 SUSAN PASTOR: Okay. Who has number five?
9 JESSIE ROSE: My name is Jessie Rose, and
10 I'm project manager for Fredrickson Trucking. My
11 responsibilities for the last four years since the
12 project started is to safely -- when the trucks are
13 loaded and settled, decontaminate the trucks and see
14 that these vehicles make their journey to the
15 landfill and dump off safely, where the trucks are
16 decontaminated again and then returned back to the

17 site. It has been an honor to work on this project.
18 I've been involved with a lot of people through the
19 agencies. We've learned a lot of information, as a
20 gentleman has stated, about doing things better.
21 There's just been countless hours going into protect
22 the safety not only on the roads, the people
23 involved, the truck drivers. My responsibility is
24 24/7 on this situation, and it's been an ongoing
25 trust that we continue to work through this and find
1 out better ways.
2 Right now we've had just many, many
3 truckloads in the last four years, and I can tell
4 you figures that would be very staggering and I
5 won't go into that. But my trust has been with
6 these folks working and actually been on the dredge,
7 seeing what's going on in the situation, and I feel
8 that this new aspect with capping is a good aspect.
9 I know they got just about everything out that they
10 possibly can. I think with the movement of the
11 river and being involved with actually the placement
12 of the new materials and how this is going to be
13 worked out, I am very confident that this is the way
14 to go.
15 You are talking about minute amounts that
16 are still out there in a deep part of the river, and
17 I know that Mr. Hartman would gladly invite people
18 to further investigate and see how these things are
19 placed and take a good look at that to have a better
20 understanding. Thank you.

Agencies Response

Thank you for your comment.

21 SUSAN PASTOR: Thank you. Number 6.
22 DON HAYFORD: My name is Don Hayford,
23 H-a-y-f-o-r-d. I'm here as a private citizen, but
24 I'm a retired chemist and I enjoy a pension from one
25 of the responsible seven. I have had some experience
1 with PCB's. I'm sure my fat has more PCB's than
2 anybody else in this room. But what I wanted to say
3 is that I think the agencies could do a better job
4 of selling the concept of capping if they would go
5 more into the background of the record of decision.
6 People get the idea that the Fox River is the
7 biggest source of PCB's into Lake Michigan. That's
8 not true. The atmosphere is and will continue to be
9 whether Lake Butte des Morts is dredged, capped, or
10 nothing is done.
11 People have the idea that there is an
12 innate human risk from PCB's in the river. The only
13 risk is if you eat fish over the advisory limit.
14 And the limits were set not on human epidemiology or
15 statistics, they were set on animal studies and
16 extrapolated linearly with a safety factor thrown
17 in. So, if you eat according to the advisories,

18 even pregnant women, in my opinion, are not at risk.
19 People have the idea that okay, dredge the
20 river, get it out, and it's out of our life. That's
21 not true, because there's part of the PCB on any
22 leaf you touch. Anytime there is a forest fire,
23 PCB's and tetraforum (phonetic) dioxins are being
24 produced. Risk is part of life. Beer causes birth
25 defects. Sunshine causes cancer. You got to
1 moderate them. The same with fishing. Also, if not
2 now, pretty soon mercury will be the biggest
3 contaminant in fish, and that will continue as long
4 as we have coal-burning power plants without any
5 treatment. Thank you very much.

Agencies Response

Thank you for your comment.

6 SUSAN PASTOR: Okay. Seven. Number
7 seven?
8 UNIDENTIFIED AUDIENCE MEMBER: She had to
9 leave.
10 SUSAN PASTOR: Number 8.
11 VICTOR MAGAR: Victor Magar, M-a-g-a-r.
12 And I'm with Environment International Corporation
13 on behalf of Glatfelter. And I have a Ph.D. in
14 environmental civil engineering and have been
15 working in the environmental industry for well over
16 20 years. And I specialize in contaminated sediment
17 remediation and risk management. In addition to my
18 experience as a sediment engineer, I participated in
19 a U.S. EPA and Army Corps of Engineers course on
20 management and remediation of contaminated
21 sediments. And that, of course, also includes
22 information on sediment capping design effectiveness
23 and monitoring management.
24 Sediment capping is a proven technology.
25 It's a remedy that is widely accepted and employed
1 in the industry increasingly. It's been used around
2 the county. A very good example of a sediment cap
3 is the Wykoff (phonetic) Eagle Harbor study.
4 Another cap that -- it's a cap that covered
5 hydrophobic organic contaminants, much like the
6 contaminants we see here. At this site there were
7 fish liver lesions before the cap was put in place.
8 The fish liver lesions have substantially declined
9 with work that was demonstrated by fish and wildlife
10 systems in that state.
11 And capping, as was described by the EPA,
12 provides a rapid and very effective and permanent
13 reduction of risk that can be used to enhance out
14 the dredging that's also being implemented at this
15 site. So, in short, I support the remedy that's
16 proposed by the State EPA and GW partners as a
17 cost-effective and, most importantly, an
18 ecologically effective and appropriate remedy for

19 this site. Thank you.

Agencies Response

Thank you for your comment.

20 SUSAN PASTOR: Okay. Number 9.

21 STEVE LASZEWSKI: Hello. My name is Steve
22 Laszewski, L-a-s-z-e-w-s-k-i. I have a Ph.D. in
23 environmental toxicology from Madison. I'm a
24 scientist with Foth, F-o-t-h, and I've been working
25 on this project since 2004.

1 My company serves as an engineering
2 contractor for the project. We have been here since
3 2004 working on the project to identify the areas
4 that need to be remediated and then we come back and
5 we verify that the remediation has been done
6 properly.

7 Since 2004, this project, the sediment
8 areas, have been dredged one specific area at a time
9 very carefully. In a perfect world it would be
10 great if we could just remove all the sediment. But
11 the science, the engineering, and the reality tells
12 us that's not possible. There are some areas that
13 just cannot be dredged, or we have areas that have
14 very low levels of PCB's still clinging on to the
15 sediment. Having been on the team with EPA and
16 Wisconsin DNR that have developed the engineering
17 and science for this plan, I would comment that the
18 principles of science and engineering for this river
19 in this specific location have been applied to make
20 sure that this plan is a safe plan to human health
21 and the environment.

22 I have also had the privilege of working
23 with the agencies and their experts in the past 10
24 years on this project. And I would assure you that
25 these folks are very much committed to protecting
1 human health and the environment and would not do
2 anything to harm the environment. As has been
3 mentioned, it's a combination of dredging, armored
4 engineered caps, and sand cover as the best way to
5 remediate and complete the remediation for this part
6 of the river.

7 This team has already removed 70 percent
8 of the PCB's from the river, and, as importantly, in
9 the last four years tens of thousands of man hours
10 have been on this project, and we understand the
11 water and sediment and the chemistry of this area
12 very, very well.

13 We have heard the comments, of course,
14 that this plan will be nothing but a cover-up. And,
15 with all due respect, our firm of scientists and
16 engineers of other firms know this part of the river
17 like the back of our hand. And what we have done is
18 we've used individual PCB data, not average PCB
19 data, but individual PCB data, to identify where the

20 high concentrations of PCB's are, to remove those
21 high concentrations, and then in areas where we have
22 lower concentration of PCB's that cannot be removed
23 by dredging, or we have low levels still clinging to
24 some of the sediments, those are the areas proposed
25 for capping, and, as has been mentioned, only in
1 areas where it's stable to cap. Furthermore, those
2 areas are going to be monitored.
3 So, in closing, I would just say that this
4 is a very well studied plan, it's been developed by
5 experts across the country, and it deserves your
6 support.

Agencies Response

Thank you for your comment.

7 SUSAN PASTOR: Next number is 10.
8 REBECCA KADERS: I'm Rebecca Kaders,
9 Director of the Clean Water Action Council of
10 Northeast Wisconsin.
11 I'd like to say, first of all, I am
12 disturbed that we are limited to only three minutes
13 to allow time for all the contractors and
14 consultants on this project and the industries
15 involved on this project to use citizen testimony
16 time to reiterate what they've already been saying
17 all along. These people have had access to you
18 agencies/agencies people for ten years behind closed doors;
19 whereas, this is our only opportunity to have access
20 to you. Those people should have waited graciously
21 to the very end of tonight to speak to allow actual
22 citizens to get up and give testimony so we don't
23 have to listen to their propaganda before we can get
24 up. We should be allowed more time to testify also
25 on such a complicated matter. To be given only
1 three minutes is an insult.
2 I'd just like everyone to recognize that
3 this plan has been weakened several times. This
4 isn't the only time it's been weakened. The
5 original plan in the nineties was to dredge down to
6 .05 parts per million. Then in 2001 it was .25
7 parts per million. Then in 2003 one part per
8 million. Now they are going to leave five parts per
9 million and just cover it with sand.
10 And we find out two days ago in the paper
11 in Green Bay that Renard Island is being used as a
12 bargaining chip with the corporations to get them to
13 pony up the money to finish the Fox River cleanup.
14 As a Brown County taxpayer, I am disgusted to hear
15 that. All these people talking about how this is
16 based on science. Bullshit. This is about money
17 and politics.
18 Renard Island is a huge repository of
19 PCB's. Some calculations show that it holds up to
20 30,000 pounds of PCB's. Somebody else was talking

21 about PCB quantities. If you want to talk PCB
22 quantities, look at Renard Island. That sediment in
23 that artificial island came from the Fox River. It
24 is the same argument, the same issue. The Fox River
25 polluters are responsible for Renard Island.
1 As a Brown County taxpayer, I do not, as a
2 property owner, want to have to pay taxes to cover
3 what is their responsibility to cover, so that you
4 will have a bargaining chip so that they will
5 voluntarily provide the money for this cleanup.
6 How about a little enforcement of the law to protect
7 public health?
8 Where are politicians on this issue? Why
9 do I have to sit here and talk to agency people?
10 It's the politicians that are making it happen this
11 way. Where is Governor Doyle on this? He's the one
12 controlling the DNR. Where is George W. Bush? He's
13 the one controlling the EPA. It's the politicians
14 that are keeping our agencies from enforcing the law
15 and forcing them to grovel for crumbs of financial
16 support from these corporations that have caused
17 hundreds of millions of dollars of damage. Over a
18 billion dollars of damage if you really total all
19 the different factors that have been affected by the
20 PCB's in the system.
21 And now we are learning you are bargaining
22 with people's lives and tax dollars down in Green
23 Bay in order to get a deal. You already bargained
24 out the bay. You are not looking at the bay at all.
25 You are not looking at Renard Isle. You bargained
1 that away. It's always something in order get these
2 guys to play nice.

Agencies Response

Renard Island is not part of the river segment covered under this ROD Amendment and is not relevant to the Proposed Plan or Amended Remedy.

3 SUSAN PASTOR: Thank you. Number 11.
4 ROGER KANITZ: My name is Roger Kanitz
5 from up in Menasha. K-a-n-i-t-z.
6 Just a few comments. I've lived in the
7 Menasha area, Fox Valley area for about seven years
8 now. I'm not a professional speaker, by the way.
9 Seven years in the area. I do live on the river in
10 the Menasha area and do appreciate the water and all
11 that it brings to the area, the visual rights,
12 thinking about the fact that it's going to be used
13 more in the future.
14 I guess, also, I am an engineer by trade,
15 so I understand a lot of the concepts that are being
16 talked about here. But, in the same sense, thinking
17 about wanting to live here the rest of my life, I'm
18 also thinking about the sustainability of the
19 long-term actions, whatever we do here.
20 I guess I would argue or at least plead

21 that the fact that, you know, you look at the safety
22 statistics and whatever else in that window, I would
23 always urge us to go toward maximizing the cleanup
24 potential, minimizing the covering. I can
25 understand if you can't get it off you can't get it
1 off, and that is going to be part of the covering
2 process anyway. But maximize the removal, because
3 that just minimizes the overall the risk everywhere.
4 I'm thinking long-term for myself, the
5 rest of the population in the area, hopefully to
6 make this a good place to live in perpetuity. Part
7 of the things that I think I've heard was if you
8 minimize funding, as far as dredging requirements
9 would be less, would be found to have dredged more.
10 So my same concern that I raised earlier about the
11 funds or whatever else coming up. I do note the
12 Nation is going to be economically challenged in the
13 future. You know, Katrina. There is going to be
14 other things, global warming. I believe in that
15 type of thing. That's going to have an impact on
16 the availability you folks have to use money to
17 remediate if we do find things in the future. So
18 that's why I'm urging, do it now while we have a
19 chance. Like one man was saying, do it right the
20 first time, because by the time you get around to it
21 the next time, there may be a whole bunch of other
22 catastrophes we are dealing with. And I'd like to
23 maximize the removal. Thank you.

Agencies Response

Responses to these comments are addressed in Section 1, Agencies Response to Comment 1, page 7, above.

24 SUSAN PASTOR: Thank you. Number 12.
25 GEORGE DEARBORN: My name is George
1 Dearborn, D-e-a-r-b-o-r-n. I'm Director of
2 Community Development for the Town of Menasha.
3 The majority of this project has occurred
4 within the town of Menasha, so I'm familiar with the
5 project from its initiation. I've worked with the
6 project managers with this activity. I'm aware of
7 the original proposal to remove a substantial amount
8 of the PCB's.
9 With the additional analysis that has
10 occurred, it is clear that, based -- from my
11 understanding, it's clear from what I have seen from
12 the analysis that when you reach a level of a very
13 limited amount of PCB's, that the ability and the
14 efficiency with the present technology to remove all
15 those PCB's is going to be not very feasible. And
16 the cost and the extension of the period of time to
17 do that would extend this project well into the
18 future.
19 One of the issues we have to look at is
20 the impact on the surrounding area if this project

21 were to continue on with a limited effectiveness to
22 remove those PCB's. So, clearly, this alternative
23 with the capping, which certainly is a technique
24 that's used, has clearly been used in these
25 situations and we also see these techniques used to
1 monitor and cap other types of pollutants. It's
2 common practice for landfills where they are
3 monitored for long periods of time. So this
4 technology is well established and monitoring can be
5 done very effectively.
6 With that in mind, I think that, clearly,
7 this alternative is an effective way to do it.
8 The ultimate results will be as effective as the
9 original proposal. And, in addition, it seems clear
10 that continuing to dredge the areas with a limited
11 amount of PCB's in my opinion would have the
12 potential of disturbing additional areas and
13 potentially could introduce more PCB's into the
14 water to flow downstream.
15 Clearly, in talking with the experts that
16 have been working on this, the technology is very
17 good; however, there are limitations to the present
18 technology. So leaving it in place by an effective
19 capping to me would be the more effective way to do
20 it. If it turns out in the future as it's monitored
21 that we still see PCB's in the environment,
22 technology certainly will improve in the future, and
23 if that's necessary to do additional, more effective
24 techniques can be utilized.

Agencies Response

Thank you for your comment.

25 SUSAN PASTOR: Okay. Thank you. Who has
1 number 13?
2 GREG SMITH: Good evening. My name is
3 Greg Smith, and I'm with G.F. Brennan, the primary
4 remediation contractor on the Little Lake cleanup.
5 My company is a nationally recognized environmental
6 dredging firm. We have been dredging for over 50
7 years. I have been involved with the project for
8 several years now. I know the project's goals, its
9 achievements. I would like to talk a little bit
10 about that tonight.
11 G.F. Brennan is located in LaCrosse,
12 Wisconsin. We have been on the project since 2004.
13 By mid-2008 we will have removed close to four
14 hundred thousand cubic yards of contaminated
15 sediment. This will make the remediation of OU-1
16 one of the largest environmental dredging projects
17 in the United States.
18 During this time, we used the most
19 sophisticated dredging technology that there is out
20 there. We have done this to remove the contaminated
21 sediment as accurately as we possibly can. We are

22 pursuing several patents on PCB equipment and
23 technology that we have developed to minimize the
24 amount of PCB's that are left behind after dredging.
25 Even with the best technology and all of our
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1 innovations, it is impossible to remove all the
2 PCB's by dredging from the project, in an entire
3 project.
4 The combination of dredging, capping, and
5 sand cover is very commonly used to remediate the
6 contaminated sediment projects. Earlier this year
7 we demonstrated that we could accurately place sand
8 cover and capping materials over soft sediments
9 without disturbing them. We are prepared to
10 complete the dredging activities and begin sand
11 cover and capping operations next season. We can
12 complete the underwater portion of the optimized
13 remedy much sooner than we can using the existing
14 RAD remedy, which will take several additional years
15 to complete. With what has already been
16 accomplished, we feel that the agencies's plans, which
17 includes dredging, capping, and sand cover, makes
18 perfect sense because it utilizes proven
19 technologies, the latest science, and availability
20 of resources to reach the project's goal in a
21 shorter period of time. Thank you for your time.

Agencies Response

Thank you for your comment.

22 SUSAN PASTOR: Fourteen.
23 KATHLEEN MEYERS: My name is Kathleen
24 Meyers. Are you all ready for a real chill? We
25 were discussing 362 identified toxic substances
1 here, 209 different chemical compounds. The
2 patterns are variable. These are the biocumulative
3 AH receptor hormone mimic neurotoxicity. There is
4 wasting or loss due to the thymic atrophy, immune
5 suppression. The eyes are affected, cardiac birth
6 defects, immune dysfunction, cancers throughout the
7 body. We are talking about the glands. Pituitary
8 problems, absorbing nutrition, skin irritations,
9 rashes, nodes, lungs affected, central nervous
10 system affected. Cancers including the liver,
11 kidney, and brain. Animals have had liver and
12 kidney damage, some with thyroid gland injuries,
13 anemia, skin damage, reproductive organ effects.
14 All studies prove auto-immune system
15 involvement. They have found people to have PCB's
16 stored in the body fat. Likewise, seals and the
17 whales. Our fatty tissue, if you lose weight, the
18 PCB's are released back into your bloodstream.
19 PCB's can be absorbed through the skin when a person
20 handles the chemical or contaminated soil, when they
21 are breathing the vapors or air containing the PCB's

22 or the dust particles. They change the liver
 23 functions in animals and humans, causing our
 24 cancers. The central nervous system and endocrine
 25 systems, as well as reproductive, are also affected.
 1 The neurotoxins may slow, accelerate, or
 2 modify the process, sequence of cells moving into
 3 the correct spot. Synapsis form neuroceptors
 4 refined and neurotransmitters and their receptors
 5 grow but are out of order when the PCB's enter you.
 6 They mess with your wiring process noted by Dr.
 7 Phillip Lannigan of New York, Mount Sinai School of
 8 Medicine. Imagine being reduced to a vegetative
 9 state wherein the PCB's impair learning and memory.
 10 And I can give you a glimpse of the medical
 11 discoveries that are affecting your entire body
 12 piece by piece by other toxic materials such as the
 13 sysnium 37, stromium 90, uranium (inaudible)
 14 stromium 230 --
 15 SUSAN PASTOR: Our court reporter is
 16 having a hard time keeping up with you.
 17 KATHLEEN MEYERS: I have to talk fast
 18 because we are listing some serious issues. Your
 19 liver, spleen, kidneys, bone, gum tissues, throat
 20 cancers, pneumonia produce infections, damage to the
 21 internal organs, heart, hemorrhages, depleted bone
 22 marrow, congestion to the brain, loss of red blood
 23 cells, lack of white blood cells to fight
 24 infections, extreme fatigue, change in their small
 25 intestines, bacteria flooding into the bloodstream
 1 and killing off the REM cells that make up the
 2 epithelial layer of your small and large intestinal
 3 tract.
 4 I have more noted on the other side.
 5 Increases the body heat, spasms in your throat,
 6 burning sensations on your lips, nausea, dizziness,
 7 headaches, increase of weight, shortness of breath,
 8 discomfort in your bowels, irritable bowel syndrome,
 9 growths in your mouth, on your bones, cysts
 10 developing, tumors developing, create the moth-eaten
 11 appearance over time. All these deadly chemicals
 12 produce heart attacks, strokes, anemia, blurred
 13 vision, swollen ankles, thymus gland is affected,
 14 adrenal gland shrinks, jaundice, lymphomas and bone
 15 (inaudible) induce swollen eyelids, easy bruising.
 16 Bleeding of the mouth, sensitivity to tissues, and
 17 can produce the gastric ulcers. And none of the
 18 above health issues have ever been discussed with
 19 the public when they started this whirlwind of let's
 20 dredge up the PCB's and see what happens.
 21 I will remind you that back in the late
 22 nineties, the profits for the HMO's were at some 250
 23 billion dollars. That was a long time ago. Imagine
 24 what they are like now. If you have the money to do
 25 the extra testing that needs to be done because our
 1 medical profession will not open this one up to the
 2 public, you can then find your alternative doctors
 3 to do the serious testing, which will cost you some

4 serious cash.
5 Do any of you remember the \$105 million
6 cover-up on the inside story of the Wisconsin Energy
7 when it leaked out Prussian blue, the oxide toxic
8 waste that burned like battery acid? Fifty-two
9 million pounds of cyanide back in 1992 were found
10 wet with sulphur, and it generates a pH that can
11 burn like battery acid. This acid hit the
12 groundwater. The raw gas contained hydrogen
13 sulfide, cyanide, arsenic, and coal tars.
14 Twenty-six thousand tons were uncovered in West
15 Allis. Hydrogen cyanide gas kills in minutes by
16 replacing the hemoglobin molecules and suffocating.
17 All of this cyanide went into the groundwater. The
18 negotiations were a mere hundred and five million,
19 the equal earnings of the power company in one year
20 back then. Of course, now we all have more energy
21 costs to consider around the corner in 2008.
22 Anyway, this was in the Milwaukee magazine
23 article for those of you who are looking for any of
24 the follow-ups other than the PCB's. That's if we
25 didn't have enough to contend with already. Anyway,
1 PCB's magnify the effect of pork, fish, chicken.
2 And, other than what I discussed before about the
3 scientists, the PCB's break down slowly and then
4 they can be carried long distances into the
5 atmosphere, rivers, lakes, and oceans.
6 By the way, I have lupis, (inaudible)
7 syndrome, scleroderma, fibromyalgia, rheumatoid
8 arthritis, osteoporosis, and just got out of five
9 years of surgery, ten years fighting with the state
10 to dig up the 87 billion on the profits for
11 (inaudible) a hundred and thirty-seven billion for
12 EDS and a hundred fifty-seven billion for waiver
13 grant money, and all of that is hush hush to the
14 politicians behind the cover-up for the elderly
15 people who are washed aside for the next profit that
16 took up the MA profit that goes inside the
17 politician's back pocketbook when I questioned it
18 all the way through.
19 Over the years it's been an interesting
20 education, and I think God kept me alive to see more
21 and then discuss to the public and find out how much
22 cancer we do have in this state of Wisconsin, which
23 we highly pride ourselves in living in one of the
24 most highly toxic states, the most in the USA.
25 Isn't that incredible? What pride do we have when
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1 we will kill our people at the cost of a dollar. It
2 is disgusting. And my family is worth millions and
3 they are disgusting. And you are supposed to think
4 that these over-educated people are going to give
5 you a deal for your buck. Oh, no, they are not.
6 They are going to give you a bank. And when you
7 bury your loved ones, you can remember me, I hope,
8 or remember Rebecca up here, because she has not
9 been able to get through.

10 I was in and out of surgery for five
11 years, so I had to take a break for a while. And I
12 can tell you that when you find the attorneys, it's
13 all been handshakes under the table also. You are
14 on your own. Sell your house, dig up the cash.
15 They stand to make a ton of money and throw you in
16 the street when they are done with you. You don't
17 play their game right. It's all about who? In the
18 last final finale, I suggest you all take a look at
19 the book by Christopher Carol on Lab 257, the
20 ultimate player on the big scale, which has a lot
21 more to do with the germ warfare projects that are
22 going on to kill us off a little quicker. That
23 author has been silenced since his book came out.
24 It's interesting. That's a chill, by the way. If
25 any of you are out for a real chill, that's a real
1 chill read. It's a brilliant book.
2 The man didn't need any more money. He
3 had a lot of it. He put it out and he interviewed
4 the scientists that were dying, and they didn't
5 really care what the federal government did with
6 their lives to get the truth out to the public on a
7 larger scale. I have a lot of knowledge from it
8 all.
9 But I have short-term memory loss because
10 it's part of the deal with PCB's. The weight gain
11 is horrific. And all I can tell you is, if you go
12 for the doctors in the valley, they will keep you
13 moving all day long. So I suggest you do your
14 research outside the medical profession inside the
15 state. That is alternative methods of doctors who
16 will give you the truth, which has not been released
17 to the public at all, while we were busy digging up
18 that first \$68 million and the billions that the
19 taxpayers are going to have to pay. These diseases
20 are no fun to live with. There are no cures, and
21 you can keep paying until you have no money left and
22 no life left, and they don't care.
23 And I've also had to dig up -- the profits
24 off the State facilities in health care are
25 horrific, and I have had to witness death along the
1 way. It is unthinkable in this country that we can
2 literally get away with murder in the name of tax
3 money by the profits into the multi-millions at the
4 state level of government. It's horrific.
5 I am one angry woman, and I have seen a
6 lot of life. And believe you me, what you are about
7 to encounter around the corner when they dig up some
8 more dredging projects and then dump the stuff in
9 Wisconsin on this side of DePere, which they don't
10 want you to know about, while they are busy telling
11 you they are dumping it up in Michigan, it really
12 doesn't matter, because I did all the research on
13 the environmental issues and, believe you me, you
14 are in for a real surprise also when God has His say
15 and what's coming with global warming around the
16 corner quick. And if you were doing anything

17 serious as scientists or -- you know, your degrees
18 don't impress me. My ex-boyfriend had three of
19 them. I can tell you that we are about to embark
20 upon a horrific venue from all the germ warfare
21 projects going on behind the public's back up in
22 New York on our agriculture baby up there that
23 generates a ton of money off tax dollars while we
24 are busy experimenting with mad cow disease and
25 other horrendous diseases that we have mutated with

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1 the human. I suggest you read. I suggest you
2 research. And these players are of no impressive
3 anything to the public. When your loved ones are
4 buried six feet under, that is serious, when you
5 have cancers that you never heard of before. I had
6 a woman in my building develop tumors in her legs
7 within 24 hours that she never -- nobody knew how to
8 tell her where they came from, because it was rare.
9 SUSAN PASTOR: Could you wrap up, please.

10 No. 15 is waving at me.

11 KATHLEEN MEYERS: I will wrap up. God is
12 in control. You people are worthless that are
13 players for the dollar. My family is worthless.
14 They are worth millions. They own a lot of lots.
15 They're worthless. Your empty houses are going to
16 rot. When your loved ones are buried, you can think
17 about what you have done to reap the benefits for
18 the multi-billions of dollars. George Bush has a
19 flare for oil. Check the author out. Find out
20 where the multi-trillions have been laundered in
21 off-shore banking over the last ten years while
22 they've been playing war. This is not a democracy.
23 Democracy will bring the world down in due time.
24 You watch.

Agencies Response

The Agencies agree that PCBS present a risk to human health and the environment. This Amended Remedy will address those risks by either removing by dredging or capping or covering the PCB contaminants.

25 SUSAN PASTOR: Thank you. Fifteen.

1 JEFF DIETZ: Jeff Dietz, Appleton,
2 Wisconsin. D-i-e-t-z. I'm confused by the last
3 person's comments. I don't know if she was for,
4 against, or neutral on cleaning up the PCB's at all.

5 KATHLEEN MEYERS: Am I neutral? They've
6 already done the damage. I am neutral because they
7 never did the research to begin with.

8 JEFF DIETZ: Do you want to clean up the
9 PCB's or do you want to leave them in place?

10 KATHLEEN MEYERS: Right now it really
11 doesn't matter, because when they take it to the
12 next level you're going to see some horrific cancers
13 that you have never seen before. I'll just leave

14 you with that thought.
15 JEFF DIETZ: I'm done.

Agencies Response

Thank you for your comment.

16 SUSAN PASTOR: Sixteen.
17 SKIP MISSIMER: Good evening. My name is
18 Skip Missimer. I'm Global Director of Environmental
19 Affairs at Glatfelter Company. Glatfelter supports
20 the optimized remedy's revised cleanup plan for
21 Little Lake Buttes des Morts for OU-1 because it is
22 the best remedy to address the contamination in
23 Little Lake Buttes des Morts based on the data and
24 information that we have today.
25 In the intervening five years since the
1 original remedy was proposed in 2002, the agencies
2 and GW partners have assembled a lot of new
3 information and, just as important, four years of
4 experience. It is this information and experience
5 that has led to the development of the revised
6 cleanup plan. Today we have over ten times more
7 data on the distribution and concentration of PCB's
8 in Little Lake Butte des Morts than we had in 2002.
9 These data indicate clearly that in the past four
10 years we have removed the hot spots where PCB
11 concentrations were relatively high. The same data
12 and information indicate that the remaining PCB's
13 are of relatively low concentration. In the past
14 four years, we have learned that dredging, very
15 precise and accurate dredging, is relatively
16 effective at removing hot spots but not effective at
17 remediating lower PCB concentrations.
18 We have completed two capping trials that
19 have demonstrated that capping is a more effective
20 remediation tool for sediments with low PCB
21 concentrations. Accordingly, the optimized remedy
22 relies not only on dredging to remove the hot spots
23 but also on capping and sand covering to remediate
24 the sediments with lower concentrations of PCB's.
25 Most importantly, the data collected since the
1 original remedy was proposed in 2002 indicate
2 clearly that if the 2002 remedy were implemented as
3 dredging alone, the original cleanup goal of 0.25
4 ppm would not be met. We support the revised
5 cleanup plan because it will allow the original
6 cleanup goal to be met.

Agencies Response

Thank you for your comment.

7 SUSAN PASTOR: Seventeen.
8 PENNY BERNARD SCHABER: I'm Penny Bernard

9 Schaber. B-e-r-n-a-r-d, S-c-h-a-b-e-r. I'm with
10 the Fox Valley Sierra group. And the Fox River is a
11 very important part of our community. It is what's
12 brought people to this area. It was the working
13 lifeline of the community and is once again becoming
14 the lifeline for the community. There is a huge
15 interest in going back to the river. People want to
16 be on the river, people want to be part of the
17 river.
18 Rarely in our lives do we have a chance to
19 fix, to correct a wrong. Many of us wish we
20 probably could correct a wrong that we have had in
21 our lives. We have that opportunity now. Our river
22 has been wronged. It has been polluted and it is
23 polluted. We need to fix it. We need to fix it the
24 best way that we can. We need to maximize the
25 removal of the PCB's from the river. I believe our
1 previous speaker had some very good points. There
2 has not been a good epidemiological study of this
3 area. When you read the papers and you look at the
4 obituaries, there are a lot of people who die in
5 this area from unknown causes and from very young
6 cancers that are very, very aggressive. So we do
7 need to look at the health problems in this river,
8 or from this river. We cannot continue to ignore
9 that.
10 It's very important to clean up this river
11 as best as we can. My concern is that the proposed
12 capping plan does not do this. The capping plan
13 continues to cover up the problem. It does not
14 correct the problem. I feel like I'm talking
15 against a stacked deck here. I think, in counting
16 my numbers here, there have been ten representatives
17 from industry who spoke, and I'm the fourth person
18 who is not representing industry who has been
19 speaking. Or the fifth person. Excuse me.
20 I noticed as I looked at Mr. Hahnenberg's
21 maps on the river and the Power Point that the
22 capping plan is proposed for the area where the
23 river narrows. And, if I remember my physics
24 correctly, as you look at a body of water where the
25 river starts to narrow, the flow increases. So that
1 concerns me that we are putting the cap in an area
2 where the flow will be increased.
3 We have a responsibility to this
4 community. We need to make sure that, if wrong, the
5 pollution of the Fox River is corrected in the most
6 complete and maximized way possible. An analysis
7 and modeling tells us a lot of things that should
8 not happen. Did we not learn anything from the
9 recent failings of the environmental plans that
10 we've seen in the past, such as the failure of the
11 levies in New Orleans? We need to plan and to do
12 the right thing so that we don't have to correct it
13 another time.

Agencies Response

The Agencies agree that PCBs present a risk to human health and the environment. This Amended Remedy addresses those risks. Regarding the effectiveness of capping, the Agencies address this in responses in Comment 1, Section 1, page 6, above. The concern regarding flow velocities for all of OU 1, including the portion of the river referenced where the river narrows, was evaluated in a detailed study of potential flow velocities in the river. The cap design considers these velocities in an appropriately conservative analysis.

14 SUSAN PASTOR: Eighteen.

15 FRED STEENIS: Fred Steenis. I'm Fred

16 Steenis, Town of Menasha. S-t-e-e-n-i-s. My only
17 comment that I'd really like to make is the fact
18 that I remember the project when it first started,
19 and the original plan was to set up incinerators on
20 the shoreline and burn all the PCB's. The PCB's
21 will be gone. Then it got watered down to dredging.
22 Now it's down to capping. Then the parts per
23 million went up and then the number of times you
24 dredge. But you know what, the PCB's are all in
25 tact yet. They are just in a different location.

1 They moved them to a different spot. In my time,
2 I wouldn't be a bit surprised if where they are
3 dumping them that pretty soon they will have
4 groundwater contaminants, be it PCB's in people's
5 water and so forth. The project does not -- the
6 cleaning up the Fox River, well, we didn't clean up
7 the PCB's. They are somewhere else over by Chilton.

8 SUSAN PASTOR: Number 19.

9 GARY WAGER: My name is Gary Wager. I

10 live in the town of Mishicot. W-a-g-e-r. I'm
11 president of the Kalamazoo River Cleanup Coalition.
12 We're a group that formed in response to an EPA plan
13 to remove PCB sediments dredged from the Kalamazoo
14 River at a mill paper site after 30 years of
15 studying. Finally got the project going and where
16 did they decide to dump the PCB's? In my back yard,
17 literally. Some of the members of our group, their
18 yards back up to the former Allied Paper Mill site,
19 where there are concentrations of PCB's that are
20 existing that are off the charts too. Some of them
21 are a thousand parts per million. So it's a hot
22 spot of its own.

23 Why I came here tonight is to find out a
24 little bit of what's going on over here on the Fox
25 River project. And I am struck by some of the
1 similarities. One thing, your project seems to be
2 further along. For our project, they spent 30 years
3 studying and only the past year began dredging.
4 Apparently you started dredging a number of years
5 ago in order to get a good start on removing the
6 PCB's from the Fox River, so you don't have to
7 verify what's going on.

8 But I'm also struck by some of the

9 similarities in that we have a retired paper mill
10 chemist that claims that PCB's, if you sprinkle them
11 on your cereal, it wouldn't hurt you, too. Maybe
12 it's the similarity in the fact that, again, the
13 potentially responsible parties are paper mills.
14 And it's not that hard to find retired chemists,
15 perhaps, that feel that PCB's are harmless.
16 My expertise starts from May of this past
17 year. So I don't think I'm an expert on any of this
18 stuff. But what I have found is that we as citizens
19 have to rely on expert opinions, and some of the
20 experts have given their opinions here tonight. The
21 EPA has some grants for some nonprofit groups that
22 also you can hire your own expert. Part of the help
23 that we are looking for in Kalamazoo is because some
24 of us, most of us anyway, in our group are citizens
25 pretty much like yourselves, although we do have an
1 advantage in Kalamazoo. We have the Paper
2 Institute, and there are some scientists there that
3 understand the PCB's and the scientist issues.
4 One of the activists in our group has I
5 think kind of summed it up. He said that, while
6 there's technical aspects to this issue, the
7 solution will be found through a political solution.
8 In other words, it's the job of concerned citizens
9 like yourselves and our folks in Kalamazoo to
10 educate ourselves as best we can and then move ahead
11 with the best possible solution. I think that's
12 what everyone is looking for.
13 And the other similarity that I see here
14 is sort of an adversarial relationship between the
15 citizens and the EPA and also the potentially
16 responsible parties. And what I have tried to
17 stress with our group is the EPA is not the enemy.
18 The EPA is the federal agency that's charged with
19 cleaning this mess up in a way that's protective of
20 environmental and human health. The potentially
21 responsible parties aren't the enemy, they are the
22 people with the money. They are the people that
23 caused the problem in the first place, but they are
24 also the people with the money and the expertise to
25 help remediate the problem.
1 To me, this is only my opinion, to me the
2 enemy is us, our political will or lack of it. The
3 only way this is going to get cleaned up is if
4 people pay attention to what's going on, educate
5 yourselves, as I am trying to educate myself for our
6 situation in Kalamazoo, and help the PRP's and the
7 EPA do the right thing. The biggest fault that I
8 have seen, which again is a similarity that I have
9 seen, I have seen here between the Fox River project
10 and the Kalamazoo project, is the tendency for
11 secrecy. Our group is working very diligently. We
12 really surprised the EPA by being successful in
13 having the EPA change -- Region 5 Administrator Mary
14 Dane (phonetic) announced that they changed their
15 minds. They had gone back to the potentially

16 responsible parties, modified the dumping plan, and
17 they are no longer bringing the PCB dredge materials
18 to a site that already has PCB dredge materials,
19 mind you, because of the political opposition to
20 that.
21 What they were forced to do -- I say
22 "forced." That may be a little strong. What they
23 decided to do is to take the PCB sediments that are
24 over 50 parts per million, class 3 I think it is, to
25 a landfill over by Detroit. Someone mentioned that
1 they were bringing it over to Michigan. It's a
2 little longer haul for you. For us it's about a
3 two-and-a-half hour, three-hour drive from our site.
4 So the material over 50 parts per million is being
5 taken to that landfill. The material that's less
6 than 50 parts per million is taken to a
7 papermill-owned landfill, if you will, but not in
8 Kalamazoo.
9 So being able to actually affect the plan
10 through political action. And, again, with the
11 political leaders. It wasn't just me waving my
12 sign, it was about 300 people who waved signs and
13 went to meetings. They wrote letters. It was our
14 political representatives, the ones that saw which
15 way the wind was blowing, they went ahead and went
16 back to the PRP's and modified what the plan was.
17 Again, you are looking at a modified plan here. And
18 it's going to take the political will of the people
19 to have an impact on that plan.
20 So thanks for the opportunity of learning
21 what's going on here in the Fox River. If you have
22 any questions and would like to speak with someone
23 about what's going on in Kalamazoo, I'd be glad to
24 speak with someone here, maybe after the meeting.

Agencies Response

Thank you for your comment.

25 SUSAN PASTOR: Who has 20?
1 RAYANNEN BENTLEY: Rayannen Bentley,
2 R-a-y-a-n-n-e-n, B-e-n-t-l-e-y, and I am
3 representing the University of Wisconsin Fox Valley
4 Student Association and the Campus Activities Board.
5 I would just like us to consider the
6 definition of "contamination." I think that
7 maintaining PCB levels and the cap along with sand
8 cover every five years isn't going to do anything to
9 reach these issues. We've been talking all evening
10 about constant maintenance and just looking at the
11 cap and making sure that everything is still fine.
12 When we go down to every five years, that's hardly
13 constant maintenance.
14 Also, we are told that this is going to be
15 a permanent structure with indefinite maintenance by
16 those -- paid for by those who are deemed

17 responsible. But covering up contaminants does not
18 remove them, and this is going to result in the
19 eventual -- probably result in the eventual removal
20 of the sand cover caps, and it leaves the problem
21 for our children and our grandchildren to deal with.
22 As far as the latest science is concerned,
23 it's surely not restricted to discovering the
24 problems and covering them up. It's not our only
25 option. Menasha town representative had stated that
1 he supports the revised plan under current
2 technology standards and that he would be willing to
3 revisit it in the future if other options come up.
4 Capping and sand covering shouldn't be considered as
5 a good enough for now option.
6 What I would like to hear from several
7 scientists that are present is the prospective
8 options using PCB-consuming bacteria. And, even if
9 we are not ready right now to utilize such a method
10 within our body of water, we implement such
11 procedures within our landfills. And the EPA could
12 surely help secure funding of grants to promote
13 viable solutions such as this. That's it. Thanks.

Agencies Response

Responses to these comments are addressed in Section 1, Agencies Response to Comment 1, page 7, above. Regarding monitoring of the cap, experience on many other capping projects, that the frequency of monitoring is sufficient, particularly considering that "trigger" events would result in more frequent monitoring.

14 SUSAN PASTOR: Okay. Thank you. 37.
15 Anything past those numbers. Okay. Well, then I
16 guess we will thank you for coming. We have lots of
17 people who would be happy to stick around and talk
18 with you a little longer. Posters, a model of the
19 cap, all kind of things. If you want to give us
20 your comments in writing, we can take them from you
21 tonight. You can use the mailer in the middle, you
22 can fax, you can e-mail, you can write it on a
23 regular piece of paper. You have till January 31 to
24 get those to us. If you have any questions in the
25 meantime, be sure to contact us. Thanks for
1 coming.

2 (The meeting concluded at 8:43 p.m.)

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Transcript of Little Lake Butte des Morts Proposed Plan Meeting 12/13/2007

1 C E R T I F I C A T E

2 STATE OF WISCONSIN)

3)

4 COUNTY OF KEWAUNEE)

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I, Nancy M. Baux, Certified Professional
7 Reporter, hereby certify that the foregoing is a true and
8 accurate transcript of the proceedings had and testimony
9 taken in the aforementioned matter.
10 Dated this 21st day of December 2007.

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19 Nancy M. Baux
20 Certified Professional Reporter

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Attachment 1. Summary of Contaminated Sediment Capping Projects

Sediment Project	Chemicals of Concern	Site Conditions	Design Thickness (feet)	Cap Material	Year Constructed	Performance Results	Comments
<u>Great Lakes Region</u>							
Sheboygan River/Harbor Wisconsin	PCBs		Composite of geotextile on fabric, 6" aggregate, geotextile, 6" cobble, with the perimeter anchored with gabions	armored stone composite	1989–1990	<ul style="list-style-type: none"> • Undetermined cap effectiveness • Some erosion of fine-grained material • WDNR/EPA order cap removal in ROD 	Demonstration bench-scale project. Composite armored cap required as sediments were located in high-energy river environment. Gabions placed around the corners for anchoring. Additional course material placed into voids/gaps.
Wausau Steel Site Wisconsin	lead, zinc, mercury	Oxbow on the Big Rib River, nearshore cap	2	composites and over geotextile	1997	<ul style="list-style-type: none"> • Chemical isolation failed • Cap not physically stable 	Methane gas trapped under the geotextile forced cap to rise in the center, pulling away geotextile from the edge. Sand erosion also occurred in the nearshore areas.
Manistique Capping Project Michigan (pilot)	PCBs		40-mil (0.1')	HDPE	1993	<ul style="list-style-type: none"> • Physical inspection of the temporary cap approximately 1 year after installation showed cap was physically intact and most anchors still in place, but was methane-filled 	A 240' by 100' HDPE temporary cap was anchored by 38 2-ton concrete blocks placed around the perimeter of the cap. This temporary cap was installed to prevent erosion of contaminated sediments within a river hotspot with elevated surface concentrations.
Hamilton Harbor Ontario, Canada	PAHs		1.6	sand (2.5 acres) (in situ)	1995	<ul style="list-style-type: none"> • Chemical isolation effective • No erosion of cap 	Cap monitoring in porewater ongoing.
<u>Puget Sound Region</u>							
Duwamish Waterway Seattle, Washington	heavy metals, PCBs		1–3	sand (4,000 cy)	1984	<ul style="list-style-type: none"> • Chemical isolation effective • No erosion of cap 	Monitoring as recent as 1996 showed cap remains effective and stable. Split-hull dump barge placed sand over relocated sediments (CAD site) in 70' water.

Sediment Project	Chemicals of Concern	Site Conditions	Design Thickness (feet)	Cap Material	Year Constructed	Performance Results	Comments
One Tree Island Olympia, Washington	heavy metals, PAHs		4	sand	1987	<ul style="list-style-type: none"> • Chemical isolation effective • No erosion of cap 	Last monitoring occurred in 1989 showed that sediment contaminants were contained.
St. Paul Waterway Tacoma, Washington	phenols, PAHs, dioxins		2–12	coarse sand	1988	<ul style="list-style-type: none"> • Chemical isolation effective • Cap within specifications 	Some redistribution of cap materials has occurred, but overall remains >1.5 m (4.9'). <i>C. californicus</i> found in sediments, but never >1 m (3.3').
Pier 51 Ferry Terminal Seattle, Washington	mercury, PAHs, PCBs		1.5	coarse sand (4 acres) (in situ)	1989	<ul style="list-style-type: none"> • Chemical isolation effective • Cap within specifications • Recolonization observed 	As recent as 1994, cap thickness remained within design specifications. While benthic infauna have recolonized the cap, there is no indication of cap breach due to bioturbation.
Denny Way CSO Seattle, Washington	heavy metals, PAHs, PCBs	water depth 18'–50'	2–3	sand (3 acres)	1990	<ul style="list-style-type: none"> • Chemical isolation effective • Cap within specifications • Recolonization observed 	Cores taken in 1996 show that while cap surface chemistry shows signs of recontamination, there is no migration of isolated chemicals through the cap.
Piers 53–55 CSO Seattle, Washington	heavy metals, PAHs		1.3–2.6	sand (4.5 acres) (in situ)	1992	<ul style="list-style-type: none"> • Chemical isolation effective • Cap stable, and increased by 15 cm (6") of new deposition 	Pre-cap infaunal communities were destroyed in the rapid burial associated with cap construction, but had recovered by 1996. The initial community established in the sand over time shifted as fine-grained material was redeposited on the cap.
Pier 64 Seattle, Washington	heavy metals, PAHs, phthalates, dibenzofuran		0.5–1.5	sand	1994	<ul style="list-style-type: none"> • Some loss of cap thickness • Reduction in surface chemical concentrations 	Thin-layer capping was used to enhance natural recovery and to reduce resuspension of contaminants during pile driving.
GP lagoon Bellingham, Washington (in situ)	mercury	Shallow intertidal lagoon	3	sand	2001	<ul style="list-style-type: none"> • Chemical isolation effective at 3-months • Cap successfully placed 	Ongoing monitoring.
East Eagle Harbor/Wyckoff Bainbridge Island, Washington	mercury, PAHs		1–3	sand (275,000 cy)	1994	<ul style="list-style-type: none"> • Chemical isolation effective • Cap erosion in ferry lanes • Some recontamination observed due to off-site sources 	Cap erosion measured within first year of monitoring only in area proximal to heavily-used Washington ferry lane. Chemicals also observed in sediment traps. Ongoing monitoring.

Sediment Project	Chemicals of Concern	Site Conditions	Design Thickness (feet)	Cap Material	Year Constructed	Performance Results	Comments
West Eagle Harbor/Wyckoff Bainbridge Island, Washington (in situ)	mercury, PAHs	500-acre site	Thin cap 0.5' over 6 acres and thick cap 3' over 0.6 acre	sand (22,600 tons for thin cap and 7,400 tons for thick cap)	partial dredge and cap 1997	• Chemical isolation effective	To date, post-verification surface sediment samples have met the cleanup criteria established for the project. Ongoing monitoring.
<u>California and Oregon</u>							
PSWH Los Angeles, California	heavy metals, PAHs	15		sand	1995	• No data to date	Overall effective cap was >15'. This was not a function of design, but rather a function of the low contaminated-to-clean sediment volume.
Convair Lagoon San Diego, California	PCBs	5.7-acre cap in 10-acre site; water depth 10'–18'	2' of sand over 1' rock	sand over crushed rock	1998	• Chemical isolation effective • Cap was successfully placed • Some chemicals observed in cap	Ongoing monitoring for 20 to 50 years including diver inspection, cap coring, biological monitoring.
McCormick and Baxter Portland, Oregon	heavy metals, PAHs	15 acres of nearshore sediments and soils	NA	sand	planned, but not constructed	• No data to date	Long-term monitoring, OMMP, and institutional controls were also specified.
<u>New England/New York</u>							
Stamford-New Haven-N New Haven, Connecticut	metals, PAHs		1.6	sand	1978	• Chemical isolation effective	Cores collected in 1990.
Stamford-New Haven-S New Haven, Connecticut	metals, PAHs		1.6	silt	1978	• Chemical isolation effective	Cores collected in 1990.
New York Mud Dump Disposal Site New York	metals (from multiple harbor sources)		unknown	sand (12 million cy)	1980	• Chemical isolation effective	Cores taken in 1993 (3.5 years later) showed cap integrity over relocated sediments in 80' of water.

Sediment Project	Chemicals of Concern	Site Conditions	Design Thickness (feet)	Cap Material	Year Constructed	Performance Results	Comments
Mill-Quinnipiac River Connecticut	metals, PAHs		1.6	silt	1981	• Required additional cap	Cores collected in 1991.
Norwalk, Connecticut	metals, PAHs		1.6	silt	1981	• No problems	Routine monitoring.
Central Long Island Sound Disposal Site (CLIS) New York	multiple harbor sources		unknown	sand	1979–1983	<ul style="list-style-type: none"> • Some cores uniform structure with low-level chemicals • Some cores chemical isolation effective • Some slumping 	Extensive coring study at multiple mounds showed cap stable at many locations. Poor recolonization in many areas.
Cap Site 1 Connecticut	metals, PAHs		1.6	silt	1983	• Chemical isolation effective	Cores collected in 1990.
Cap Site 2 Connecticut	metals, PAHs		1.6	sand	1983	• Required additional cap	Cores collected in 1990.
Experimental Mud Dam New York	metals, PAHs		3.3	sand	1983	• Chemical isolation effective	Cores collected in 1990.
New Haven Harbor New Haven, Connecticut	metals, PAHs		1.6	silt	1993	• Chemical isolation effective	Extensive coring study.
Port Newark/Elizabeth New York	metals, PAHs		5.3	sand	1993	• Chemical isolation effective	Extensive coring study.
52 Smaller Projects New England	metals, PAHs		1.6	silt	1980–1995	• Chemical isolation effective	Routine monitoring.

Sediment Project	Chemicals of Concern	Site Conditions	Design Thickness (feet)	Cap Material	Year Constructed	Performance Results	Comments
<u>Other North American Projects</u>							
Soda Lake, Wyoming	oil refinery residuals	soft, unconsolidated sediments	3	sand	2000	• Chemical isolation effective	Demonstration project that showed successful placement over soft sediments and isolation of PAHs and metals in refinery residuals.
<u>International Projects</u>							
Rotterdam Harbor Netherlands	oils	water depth 5 to 12 m	2–3	silt/clay sediments	1984	• No available monitoring data	As pollution of groundwater was a potential concern, the site was lined with clay prior to sediment disposal and capping.
Hiroshima Bay Japan		Water depth 21 m	5.3	sand	1983	• No available data	